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GOVERNMENT OF INDIA

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PROTECTION OF PLANT VARIETIES & FARMERS' RIGHTS AUTHORITY
NASC COMPLEX, DPS MARG, Opp. Todapur Village, New Delhi-110012



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Plant Variety Journal of India is the Official Journal of the Protection of Plant Varieties and Farmers' Rights Authority (PPV & FRA) published by the Registrar on behalf of the Chairperson, PPV & FRA, NASC Complex (IInd Floor), DPS Marg, Opp. Todapur Village, New Delhi-110012 under the PPV & FR Act, 2001 and Rule 2 (g) of the PPV & FR Rules, 2003.

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OFFICIAL NOTICE

**Sub : Notification of Central Potato Research Station (CPRS),
Jalandhar as DUS test centre under Rule 29 (7) of PPV&FR
Rules, 2003.**

The Protection of Plant Varieties and Farmers' Rights Authority hereby empanels Central Potato Research Station (CPRS), Post Bag No. 1, Model Town, Jalandhar- 14003 (Punjab) as one of the DUS test centre for Potato (*Solanum tuberosum* L) in addition to the other DUS test centres notified in DUS test guidelines for Potato (*Solanum tuberosum* L) published in PVJ Vol. 03 No 11, 2009.

Sd/-
MANOJ SRIVASTAVA
REGISTRAR

PUBLIC NOTICE

Sub: Notice is given under Rule 29 (8 and 9) of the PPV & FR Rules, 2003.

As a requirement under Rule 29 (8 and 9) of the PPV & FR Rules, 2003, it is hereby informed that the specific DUS test guideline for three species of Orchid namely *Cattleya Lindl.* and *Phalaenopsis* Blume is hereby published in 'Plant Variety Journal of India', Vol. 06, No. 11, November 01, 2012. Interested parties may read these guidelines and act accordingly.

Sd/-
MANOJ SRIVASTAVA
REGISTRAR

Orchid (*Cattleya* Lindl.)

I. Subject

These test guidelines apply to all vegetatively propagated varieties of *Cattleya* Lindl. and alliance of the family Orchidaceae.

II. Plant Material Required

1. The Protection of Plant Varieties and Farmers' Rights Authority (PPV & FRA) shall decide when, where and in what quantity and quality the plant material are required for testing of a variety denomination for registration under the Protection of Plant Varieties and Farmers' Rights (PPV & FR) Act, 2001. Applicants submitting such plant material from a country other than India shall make sure that all customs and quarantine requirements stipulated under relevant national legislations and regulations are complied with.
2. For all varieties, two to three years old 20 plants (10 for each Centre) with at least two shoots shall be required for DUS testing.
3. The plant material supplied should be visibly healthy, not lacking in vigour nor affected by any pests or diseases or mechanical damage.
4. Plant material shall not have undergone any chemical or bio-physical treatment unless the competent authority allow or request such treatment. If it has been treated, details of the treatment must be given.

III. Conduct of Test

1. The minimum duration of test should normally be two similar flowering seasons.
2. Test shall normally be conducted at two places. If any essential characteristic of the variety is not expressed for visual observations at these places, the variety shall be considered for further examination at another appropriate test site or under special test protocol on request of the applicant.

3. The test should be carried out under greenhouse conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.
4. The design of the test should be such that the plants or parts of the plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the flowering period. Each test should be designed to a result in total of at least 10 plants.
5. Unless otherwise indicated, all observations determined by measuring or counting should be made on 10 plants or parts taken from each of 10 plants.
6. Additional tests for special purposes may be established.
7. Normally, growth regulators shall not be used.

IV. Methods and Observations

1. The characteristics described in the Table of Characteristics (Section VII) shall be used for the testing of varieties for their DUS.
2. For the assessment of Distinctiveness and Stability, all observations shall be made on 10 plants or parts taken from each of 10 plants.
3. For the assessment of Uniformity, a population standard of 1% and an acceptance probability of at least 95% shall be applied. In the case of a sample size of 10 plants, the maximum number of off-types allowed would be 1.
4. All observations on the shoot shall be made on the flowering shoot.
5. All observations on the leaf shall be made on the longest leaf of a flowering shoot.
6. All observations on the inflorescence and the flower shall be made at the time when 50% of the flowers on the inflorescence have opened and on the most recently fully opened flower on the inflorescence before fading of colour.
7. All observations on the length and width of the flower and parts of the flower shall be made in the spread out position.
8. All observations on the colour of sepal, petal, lip and column shall be made on the inner side.

9. For the assessment of colour characteristics, the Royal Horticultural Society (RHS) colour chart shall be used.

V. Grouping of Varieties

1. The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness is aided by the use of grouping characteristics.
2. Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.
3. The following have been agreed as useful grouping characteristics:
 - a) Plant: height (Characteristic 1)
 - b) Leaf: number/pseudobulb (Characteristic 6)
 - c) Flower size: width in front view (Characteristic 17)
 - d) Petal: predominant colour (Characteristic 36)
 - e) Lip: predominant colour (Characteristic 41)
 - f) Lip: colour pattern (Characteristic 43)

VI. Characteristics and Symbols

1. To assess Distinctness, Uniformity and Stability, the characteristics and their states as given in the Table of Characteristics shall be used.
2. Notes 1-9 (numbers) shall be used to describe the state of each character for the purpose of electronic data processing.
3. Legend
 - (*) Characteristics that shall be observed during every growing season for varieties and hybrids and shall always be included in the description of the varieties and hybrids, except when the state of expression of any of these

characters is rendered impossible by a preceding phenological characteristic or by the environment conditions of the testing region. Under such exceptional situation, adequate explanation shall be provided.

(+) See explanations on the Table of Characteristics

4. Characteristics denoted with symbols QL, QN and PQ in the first column of the Table of Characteristics shall be indicated as :

QL: Qualitative characteristic

QN: Quantitative characteristic

PQ: Pseudo-qualitative characteristic

5. (a)-(e) see Section VIII for explanation
6. Type of assessment of characteristics indicated in column six of the Table of Characteristics are as follows:

MG: Measurement by a single observation of a group of plants or parts of plants

MS: Measurement of a number of individual plants or parts of plants

VG: Visual assessment by a single observation of a group of plants or parts of plants

VS: Visual assessment by observations of individual plants or parts of plant

VII. Table of Characteristics

Sl. No.	Characteristic	State	Note	Example Varieties /hybrids	Type of Assessment
1. (* QN	Plant height (From base to the tip of the flowering shoot)	Small (< 15 cm)	3	Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	MS
		Medium (15-30 cm)	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City'	
		Large (> 30 cm)	7	--	
2. (* (+)	Nature of pseudobulb (at flowering)	Cylindric	1	Blc 'Guanmiao City', C. 'Queen Sirikhit'	VG
		Clavate	3	Lc 'Purple Cascade Fragrant B', Blc	

PQ				'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen'	
		Globular / Ovoid	5	Lc 'Ahmad Sheikhi'	
3. QN	Pseudobulb length (at flowering)	Short (<10 cm)	3	Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	MS
		Medium (10-20cm)	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen',	
		Long (>20 cm)	7	--	
4. QN	Pseudobulb breadth at broadest part (at flowering)	Narrow (<1.0 cm)	3	Lc 'Purple Cascade Fragrant B', Blc 'Guanmiao City',	MS
		Medium (1.0-2.0 cm)	5	Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
		Broad (>2.0 cm)	7	--	
5. QN	Number of shoots / plant	Few (<5)	3	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess',	VG
		Many (5 or more)	7	C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
6. (* QN (a)	Number of leaves/ pseudobulb	One (Unifoliate)	1	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	VG
		Two (Bifoliate)	9	C. 'Queen Sirikhit',	
7. QN (a)	Leaf length (largest leaf)	Short (<10 cm)	3	--	MS
		Medium (10-15 cm)	5	C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps	

				coerulea, Lc 'Ahmad Sheikhi'	
		Long (>15 cm)	7	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Chinese Beauty Orchid Queen',	
8. QN (a)	Leaf width (largest leaf)	Narrow (<2.5 cm)	3	--	MS
		Medium (2.5-5.0 cm)	5	C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea	
		Broad (>5.0 cm)	7	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Chinese Beauty Orchid Queen', Lc 'Ahmad Sheikhi'	
9. (+) PQ (a)	Leaf shape (largest leaf)	Narrow oblong	1	Lc 'Manriner Far Horizon x L. anceps coerulea	VG
		Ligulate	3	--	
		Elliptic	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Ahmad Sheikhi'	
		Ovate	7	C. 'Queen Sirikhit'	
10. PQ (a)	Leaf colour pattern	Uniformly green on both sides	1	C. 'Queen Sirikhit', Lc 'Purple Cascade Fragrant B', Blc 'Hsinging Catherine'	VG
		Green upside/ purple beneath	3	Lc 'Ahmad Sheikhi'	
		Spotted	5	Blc 'Chinese Beauty Orchid Queen',	
		Streaked	7	--	
11. QN (b)	Inflorescence : number / pseudobulb at a time	One	1	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	VG
		Two or more	5	--	
12. QN (b)	Inflorescence length (base of peduncle to the tip of the flowers)	Short (<15 cm)	3	Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	MS
		Medium (15- 30 cm)	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging	

				Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City'	
		Long (>30 cm)	7	--	
13. QN (b)	Peduncle sheath length	Short (<3 cm)	3	--	MG
		Medium (3-5 cm)	5	C. 'Queen Sirikhit', Blc 'Guanmiao City', Lc 'Ahmad Sheikhi'	
		Long (>5 cm)	7	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon' x L. anceps coerulea	
14. QN (b)	Peduncle length (base of inflorescence to the 1 st Flower)	Short (<5 cm)	3	Lc 'Manriner Far Horizon' x L. anceps coerulea, Lc 'Ahmad Sheikhi'	MS
		Medium (5-10 cm)	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen'	
		Long (>10 cm)	7	Blc 'Guanmiao City',	
15. QN (b)	Flower number per peduncle	Few (up to three)	3	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	MG
		Many (more than three)	5	C. 'Queen Sirikhit', Blc 'Guanmiao City', Lc 'Purple Cascade Fragrant B'	
16. QN (c)	Flower length (Tip of dorsal sepal to tip of lip)	Short (<8 cm)	3	C. 'Queen Sirikhit'	MS
		Medium (8 -16 cm)	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
		Long (>16 cm)	7	--	
17. (* QN (c)	Flower width in front view (distance between tips of two lateral petals)	Narrow (<8 cm)	3	C. 'Queen Sirikhit'	MS
		Medium (8-16 cm)	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao	

				City', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
		Broad (>16 cm)	7	--	
18. QN (b)	Flower longevity on the plant	Short (<15 days)	3	--	VG
		Medium (15-30 days)	5	Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess'	
		Long (> 30 days)	7	C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
19. QN (c)	Dorsal sepal length	Short (<5 cm)	3	C. 'Queen Sirikhit'	MS
		Medium (5-10 cm)	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
		Long (>10 cm)	7	--	
20. QN (c)	Dorsal sepal width (at middle)	Narrow (<2 cm)	3	C. 'Queen Sirikhit', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea	MS
		Medium (2-3 cm)	5	Lc 'Ahmad Sheikhi'	
		Broad (>3 cm)	7	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen'	
21. (+) PQ	Dorsal sepal shape	Oblong	1	Lc 'Purple Cascade Fragrant B', Blc 'Chinese Beauty Orchid Queen', Lc 'Ahmad Sheikhi'	VG
		Lanceolate	3	Blc 'Guanmiao City'	
		Elliptic	5	Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Lc 'Manriner Far Horizon x L. anceps coerulea	
		Ovate	7	Blc 'Hsinging Catherine'	
22. (+) PQ	Dorsal sepal apex	Acute	1	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea	VG

		Notched	3	Blc 'Hsinging Catherine'	
		Obtuse	5	Lc 'Ahmad Sheikhi'	
23. (+) PQ	Dorsal sepal curvature	Incurved	1	Lc 'Purple Cascade Fragrant B', C. 'Queen Sirikhit', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City',	VG
		Straight	3	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Lc 'Manriner Far Horizon x L. anceps coerulea	
		Reflexed	5	Lc 'Ahmad Sheikhi'	
24. QN (c)	Lateral sepal length	Short (<5 cm)	3	Lc 'Purple Cascade Fragrant B', C. 'Queen Sirikhit', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea	MS
		Medium (5-10 cm)	5	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Ahmad Sheikhi'	
		Long (>10 cm)	7	--	
25. QN (c)	Lateral sepal width	Narrow (<2 cm)	3	Lc 'Purple Cascade Fragrant B', C. 'Queen Sirikhit', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea	MS
		Medium (2-3 cm)	5	Lc 'Ahmad Sheikhi'	
		Broad (>3 cm)	7	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen'	
26. (+) PQ	Lateral sepal shape	Oblong	1	Lc 'Purple Cascade Fragrant B'	VG
		Lanceolate	3	Blc 'Guanmiao City'	
		Elliptic	5	C. 'Queen Sirikhit', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
		Ovate	7	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine'	
27. (+) PQ	Lateral sepal apex	Acute	1	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City'	MG
		Notched	3	Blc 'Hsinging Catherine', Lc 'Ahmad Sheikhi'	
		Obtuse	5	--	
28. (+) PQ	Lateral sepal curvature	Incurved	1	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Chinese Beauty	VG

				Orchid Queen', Lc 'Manniner Far Horizon x L. anceps coerulea	
		Straight	3	Blc 'Guanmiao City', Lc 'Ahmad Sheikhi'	
		Reflexed	5	Blc 'Hsinging Catherine'	
29. QL (d)	Sepal dominant colour	Green	1	--	VG
		White	2	C. 'Queen Sirikhit', Blc 'Hsinging Catherine'	
		Pink	3	--	
		Yellow	4	Blc 'Mem Ann Balmores Convess', Lc 'Ahmad Sheikhi'	
		Red	5	Blc 'Chinese Beauty Orchid Queen'	
		Purple	6	Lc 'Purple Cascade Fragrant B', Lc 'Manniner Far Horizon x L. anceps coerulea	
		Blue	7	--	
		Violet	8	Blc 'Guanmiao City'	
30. QL (d)	Sepal colour pattern inside	Uniform	1	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Lc 'Manniner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	MG
		Mixed	2	--	
		Spotted	3	Blc 'Guanmiao City'	
		Blotched	4	--	
		Shaded /Striped	5	Blc 'Chinese Beauty Orchid Queen'	
		Netted	6	--	
31. QN (c)	Petal length	Short (<5 cm)	3	Lc 'Purple Cascade Fragrant B', C. 'Queen Sirikhit', Blc 'Guanmiao City'	MS
		Medium (5-10 cm)	5	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Manniner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
		Long (>10 cm)	7	--	
32. QN (c)	Petal width (at middle)	Narrow (<2 cm)	3	Lc 'Purple Cascade Fragrant B', Blc 'Guanmiao City'	MS
		Medium (2-5 cm)	5	C. 'Queen Sirikhit', Lc 'Manniner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
		Broad (>5 cm)	7	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen'	

33. (+) PQ	Petal shape	Oblong	1	--	VG
		Lanceolate	3	--	
		Elliptic	5	Lc 'Purple Cascade Fragrant B', Blc 'Guanmiao City', Lc 'Ahmad Sheikhi'	
		Ovate	7	Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon x L. anceps coerulea	
		Round	9	--	
34. (+) PQ	Petal curvature	Incurved	1	Lc 'Purple Cascade Fragrant B', C. 'Queen Sirikhit', Lc 'Manriner Far Horizon x L. anceps coerulea	VG
		Straight	3	Blc 'Mem Ann Balmores Convess', Lc 'Ahmad Sheikhi'	
		Reflexed	5	Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City'	
35. (+) PQ	Petal margin	Entire	1	Blc 'Guanmiao City'	VG
		Undulate	3	Lc 'Purple Cascade Fragrant B', Lc 'Ahmad Sheikhi'	
		Undulate crisped	5	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', C. 'Queen Sirikhit'	
36. (* QL (d)	Petal predominant colour	Green	1	--	VG
		White	2	C. 'Queen Sirikhit', Blc 'Hsinging Catherine'	
		Yellow	3	Blc 'Mem Ann Balmores Convess', Blc 'Chinese Beauty Orchid Queen', Lc 'Ahmad Sheikhi'	
		Pink	4	--	
		Red	5	--	
		Purple	6	Lc 'Purple Cascade Fragrant B', Lc 'Manriner Far Horizon x L. anceps coerulea	
		Blue	7	--	
		Violet	8	Blc 'Guanmiao City'	
37. QL (d)	Petal colour pattern	Uniform	1	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	VG
		Mixed	3	--	
		Spotted	5	Blc 'Guanmiao City'	

		Striped/ shaded	7	Blc 'Chinese Beauty Orchid Queen'	
		Netted	9	--	
38. QN (c)	Lip length	Short (<4 cm)	3	Lc 'Purple Cascade Fragrant B'	MG
		Medium (4- 7 cm)	5	C. 'Queen Sirikhit', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea', Lc 'Ahmad Sheikhi'	
		Long (>7 cm)	7	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine'	
39. QN (c)	Lip width	Narrow (<4 cm)	3	Lc 'Purple Cascade Fragrant B', C. 'Queen Sirikhit', Blc 'Guanmiao City'	MG
		Medium (4- 7 cm)	5	Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon x L. anceps coerulea', Lc 'Ahmad Sheikhi'	
		Broad (>7 cm)	7	Blc 'Mem Ann Balmores Convess'	
40. (+) PQ	Lip shape	Oblong	1	Blc 'Hsinging Catherine', Lc 'Ahmad Sheikhi'	VG
		Lanceolate	3	--	
		Elliptic	5	--	
		Ovate	7	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon x L. anceps coerulea'	
41. (* QL (d)	Lip predominant colour	Green	1	--	VS
		White	2	--	
		Yellow	3	Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Lc 'Ahmad Sheikhi'	
		Pink	4	--	
		Red	5	Blc 'Chinese Beauty Orchid Queen',	
		Purple	6	Lc 'Purple Cascade Fragrant B', Blc 'Hsinging Catherine', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea'	
		Blue	7	--	
		Violet	8	--	
42. QL (d)	Lip colour (nos.)	One	1	--	VS
		Two	3	Lc 'Purple Cascade Fragrant B', (white & purple), C. 'Queen Sirikhit'(yellow &	

				green), Blc ‘Hsinging Catherine’(yellow & purple), Blc ‘Chinese Beauty Orchid Queen’, (red & purple), Lc ‘Ahmad Sheikhi’ (yellow & purple)	
		More than two	5	Blc ‘Mem Ann Balmores Convess’, (green, yellow & orange), Blc ‘Guanmiao City’, (yellow, purple & violet), Lc ‘Manriner Far Horizon x L. anceps coerulea (purple, yellow & green)	
43. (* QL (d)	Lip colour pattern	Uniform	1	--	VG
		Mixed	3	--	
		Spotted	5	Blc ‘Guanmiao City’, Lc ‘Ahmad Sheikhi’	
		Striped/ Shaded	7	Lc ‘Purple Cascade Fragrant B’, Blc ‘Mem Ann Balmores Convess’, C. ‘Queen Sirikhit’, Blc ‘Hsinging Catherine’, Blc ‘Chinese Beauty Orchid Queen’, Lc ‘Manriner Far Horizon x L. anceps coerulea	
		Netted	9	--	
44. (+) PQ	Lip lateral lobe shape	Oblong	1	Blc ‘Guanmiao City’, C. ‘Queen Sirikhit’, Blc ‘Chinese Beauty Orchid Queen’	VG
		Lanceolate	3	--	
		Elliptic	5	--	
		Ovate	7	--	
		Round	9	Blc ‘Hsinging Catherine’	
45. (+) PQ	Lip lateral lobe margin	Entire	1	Lc ‘Purple Cascade Fragrant B’, Lc ‘Ahmad Sheikhi’	VG
		Undulate	3	Blc ‘Guanmiao City’, C. ‘Queen Sirikhit’, Blc ‘Chinese Beauty Orchid Queen’, Blc ‘Hsinging Catherine’	
		Undulate-crisped	5	Blc ‘Mem Ann Balmores Convess’	
46. (+) PQ	Lip mid lobe shape	Oblong	1	Lc ‘Purple Cascade Fragrant B’, Lc ‘Ahmad Sheikhi’, Blc ‘Mem Ann Balmores Convess’, Blc ‘Chinese Beauty Orchid Queen’	VG
		Lanceolate	3	--	
		Elliptic	5	--	
		Ovate	7	--	
		Round	9	Blc ‘Guanmiao City’, Blc ‘Hsinging Catherine’	
47.	Lip mid lobe	Entire	1	--	VG

(+) PQ	margin	Undulate	3	Lc 'Purple Cascade Fragrant B'	
		Undulate-crisped	5	Lc 'Ahmad Sheikhi', Blc 'Mem Ann Balmores Convess', Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Blc 'Hsinging Catherine', C. 'Queen Sirikhit'	
48. PQ	Lip surface inside	Glabrous	1	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea	VG
		Bump and ridged	3	--	
		Pubescent/tuberclcd	5	C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Ahmad Sheikhi'	
49. QN	Column length	Short (<2 cm)	1	Lc 'Purple Cascade Fragrant B', Blc 'Guanmiao City'	MS
		Long (2 cm or more)	5	Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
50. QL (e)	Column colour (nos.)	One	1	Lc 'Manriner Far Horizon x L. anceps coerulea (white)	VG
		Two or more	9	Lc 'Purple Cascade Fragrant B', (purple & green), Blc 'Mem Ann Balmores Convess' (yellow & green) C. 'Queen Sirikhit'(yellow & green), Blc 'Hsinging Catherine' (yellow, green & white), Blc 'Chinese Beauty Orchid Queen', (red, purple & yellow), Blc 'Guanmiao City'(purple, yellow & white), Lc 'Ahmad Sheikhi' (yellow & green)	
51. QL (e)	Column colour pattern	Uniform	1	Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	VG
		Spotted	3	Blc 'Guanmiao City'	
		Blotched	5	--	
		Streaked / striped /shaded	7	Lc 'Purple Cascade Fragrant B', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen'	
52. QN (c)	Length of flower pedicel (with	Short (<5 cm)	1	Lc 'Purple Cascade Fragrant B', C. 'Queen Sirikhit', Blc 'Guanmiao City'	MS

	ovary)	Long (5 cm or more)	5	Blc 'Mem Ann Balmores Convess', Blc 'Hsinging Catherine', Blc 'Chinese Beauty Orchid Queen', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	
53. PQ	Flowering season	Winter	1	Blc 'Chinese Beauty Orchid Queen', Blc 'Guanmiao City', Lc 'Manriner Far Horizon x L. anceps coerulea, Lc 'Ahmad Sheikhi'	VG
		Summer	3	--	
		Rainy	5	Lc 'Purple Cascade Fragrant B', Blc 'Mem Ann Balmores Convess', C. 'Queen Sirikhit', Blc 'Hsinging Catherine'	
		Year round	7	--	

VIII. Explanation on the Table of Characteristics

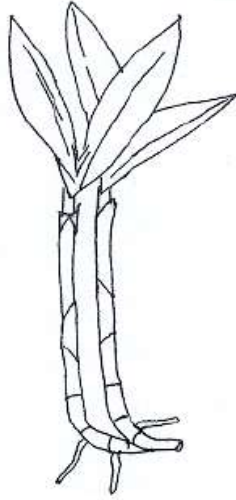
8.1 Guidelines for recording the observations of vegetative and flowering characteristics

Characteristics indicated with (a), (b), (c), (d) and (e) in the first column of the Table of Characteristics should be examined as indicated below:

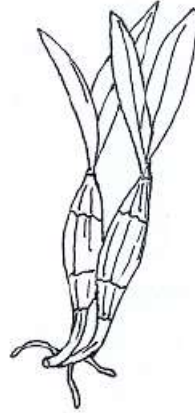
- (a) Observations on the leaf should be made on the longest leaf of flowering plant..
- (b) Observations on the inflorescence and the flower shall be made at the time when 50% of the flowers on the inflorescence have opened and the most recently fully opened flower on the inflorescence before the color starts to fade.
- (c) Observations on the length and width of the flower and parts of the flower shall be made on the spread out positions.
- (d) Observations on the color of the sepal, the petal and the lip shall be made on inner side at apex, mid and base portion.
- (e) Observations on the colour of column shall be made on inner side at apex, mid and basal region.

8.2 Explanation for individual characteristics

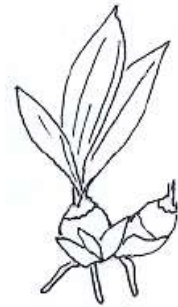
Characteristic 2: Nature of pseudobulb



1
Cylindric



3
Clavate



5
Globular/Ovoid

Characteristic 9: Leaf shape



1
Narrow oblong



3
Ligulate



5
Elliptic



7
Ovate

Characteristics 21 & 26: Dorsal sepal shape (21) and Lateral sepal shape (26)



1
Oblong



3
Lanceolate



5
Elliptic



7
Ovate

Characteristics 22 & 27: Dorsal sepal apex (22) and Lateral sepal apex (27)



1
Acute

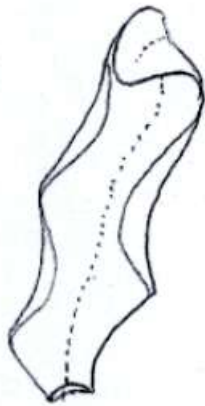


3
Notched



5
Obtuse

Characteristics 23, 28 & 34: Dorsal sepal curvature (23), Lateral sepal curvature (28) and Petal curvature (34)



1
Incurved



3
Straight



5
Reflexed

Characteristics 33, 44 & 46: Petal shape (33), Lip lateral lobe shape (44) and Lip mid lobe shape (46)



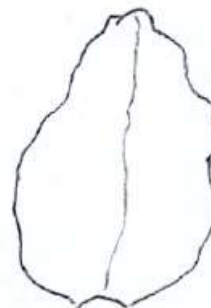
1
Oblong



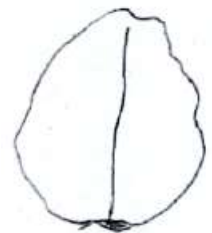
3
Lanceolate



5
Elliptic

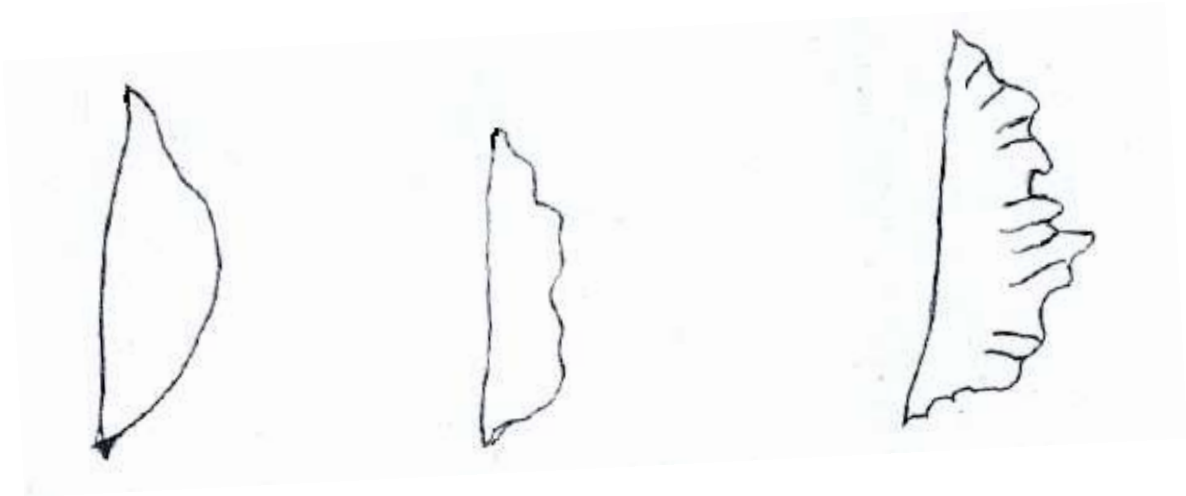


7
Ovate



9
Round

Characteristics 35, 45 & 47: Petal margin (35), Lip lateral lobe margin (45) and Lip mid lobe margin (47)



1
Entire

3
Undulate

5
Undulate crisped

IX. Name of DUS Test Centres

Nodal DUS Test Centre	Other Test Centre
National Research Centre for Orchids, Pakyong-737106, Sikkim	1. State Forest Research Institute, Orchid Research Centre, Tipi, West Kameng Distt., Arunachal Pradesh 2. Department of Pomology and Floriculture, College of Horticulture, Kerala Agricultural University, Trichur

Orchid (*Phalaenopsis* Blume)

I. Subject

These test guidelines apply to all vegetatively propagated varieties of *Phalaenopsis* Blume and alliance of the family Orchidaceae.

II. Plant Material Required

5. The Protection of Plant Varieties and Farmers' Rights Authority (PPV & FRA) shall decide when, where and in what quantity and quality the plant material are required for testing of a variety denomination for registration under the Protection of Plant Varieties and Farmers' Rights (PPV & FR) Act, 2001. Applicants submitting such plant material from a country other than India shall make sure that all customs and quarantine requirements stipulated under relevant national legislations and regulations are complied with.
6. For all varieties, 20 flowering size plants (10 for each Centre) shall be required for DUS testing.
7. The plant material supplied should be visibly healthy, not lacking in vigour nor affected by any pests or diseases or mechanical damage.
8. Plant material shall not have undergone any chemical or bio-physical treatment unless the competent authority allow or request such treatment. If it has been treated, details of the treatment must be given.

III. Conduct of Test

8. The minimum duration of test should normally be two similar flowering seasons.
9. Test shall normally be conducted at two places. If any essential characteristic of the variety is not expressed for visual observations at these places, the variety shall be considered for further examination at another appropriate test site or under special test protocol on request of the applicant.

10. The test should be carried out under greenhouse conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.
11. The design of the test should be such that the plants or parts of the plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the flowering period. Each test should be designed to a result in total of at least 10 plants.
12. Unless otherwise indicated, all observations determined by measuring or counting should be made on 10 plants or parts taken from each of 10 plants.
13. Additional tests for special purposes may be established.
14. Normally, growth regulators shall not be used.

IV. Methods and Observations

10. The characteristics described in the Table of Characteristics (Section VII) shall be used for the testing of varieties for their DUS.
11. For the assessment of Distinctiveness and Stability, all observations shall be made on 10 plants or parts taken from each of 10 plants.
12. For the assessment of Uniformity, a population standard of 1% and an acceptance probability of at least 95% shall be applied. In the case of a sample size of 10 plants, the maximum number of off-types allowed would be 1.
13. All observations on the shoot shall be made on the flowering shoot.
14. All observations on the leaf shall be made on the longest leaf of a flowering shoot.
15. All observations on the inflorescence and the flower shall be made at the time when 50% of the flowers on the inflorescence have opened and on the most recently fully opened flower on the inflorescence before fading of colour.
16. All observations on the length and width of the flower and parts of the flower shall be made in the spread out position.
17. All observations on the colour of sepal, petal, lip and column shall be made on the inner side.
18. For the assessment of colour characteristics, the Royal Horticultural Society (RHS) colour chart shall be used.

V. Grouping of Varieties

1. The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness is aided by the use of grouping characteristics.
4. Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.
5. The following have been agreed as useful grouping characteristics:
 - e) Plant: size (Characteristic 1)
 - f) Flower size: width in front view (Characteristic 15)
 - g) Petal: colour pattern (Characteristic 38)
 - h) Petal: predominant colour (Characteristic 39)
 - e) Lip: colour pattern of apical lobe (Characteristic 50)
 - f) Lip: predominant colour of apical lobe (Characteristic 51)

VI. Characteristics and Symbols

7. To assess Distinctness, Uniformity and Stability, the characteristics and their states as given in the Table of Characteristics shall be used.
8. Notes 1-9 (numbers) shall be used to describe the state of each character for the purpose of electronic data processing.
9. Legend
 - (*) Characteristics that shall be observed during every growing season for varieties and hybrids and shall always be included in the description of the varieties and hybrids, except when the state of expression of any of these characters is rendered impossible by a preceding phenological characteristic or by the environment conditions of the testing region. Under such exceptional situation, adequate explanation shall be provided.
 - (+) See explanations on the Table of Characteristics

10. Characteristics denoted with symbols QL, QN and PQ in the first column of the Table of Characteristics shall be indicated as :

QL: Qualitative characteristic

QN: Quantitative characteristic

PQ: Pseudo-qualitative characteristic

11. (a)-(e) see Section VIII for explanation

12. Type of assessment of characteristics indicated in column six of the Table of Characteristics are as follows:

MG: Measurement by a single observation of a group of plants or parts of plants

MS: Measurement of a number of individual plants or parts of plants

VG: Visual assessment by a single observation of a group of plants or parts of plants

VS: Visual assessment by observations of individual plants or parts of plant

Table of Characteristics

Sl. No	Characteristics	States	Notes	Example Varieties /Hybrids	Type of Assessment
1. (* QN	Plant: size (cm)	Very small (<3.0)	1	--	MS
		Small (3.0 – 4.5)	3	Dtps. ‘Younghome Orange Lip’, Dtps. ‘Acker’s Sweetie’, Dtps. ‘Big Red Robe’, Dtps. ‘Mount Lip Taisuco’, P. ‘Amabilis’, Dtps. ‘Tying Shin Zebra’, P. ‘Luchia Pink’, P. ‘Jin Cheng Sun’, P. ‘Sin Yuan Golden Beauty’, P. ‘Little Gem Stripe’, P. ‘Surf Song’, Dtps. ‘Lian Her Happy’, P. ‘Timothy Christopher’, Dtps. ‘Happy UFO’, P. ‘Big White Pink Stripe’, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory Pearl, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy ‘GL’, P. Shu Long Spotted Deer, P. Ho’s Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung.	
		Medium (4.6 – 6.0)	5	Dtps. Plum Rose x Ox Black Jack, P. Memoria Francis Hunter, Dtps. Chin Ann Diamond ‘Alisun’, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen	

				Pearl 'Cx#1', P. Miki Wata Nabe, Dtps. Chian Xen Magpie	
		Large (>6.0 - 7.5)	7	Dtps. Shu Long Pearl, P. Taida Salu Red, Dtps. Shih Hua Long First Love	
		Extra large (>7.5)	9	P. Kaleidoscope, P. Strawberry, Dtps. Hsin Yang Fortune	
2. (* QN (a)	Leaf: length (cm)	Short (<10)	3	P. Big White Pink Stripe	MS
		Medium (10 -15)	5	Dtps. Mount Lip Taisuco, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, P. Medium Pink, P. Magic Kiss, Goldie, Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Shulong Sun Beauty.	
		Long (>15 - 20)	7	Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, Dtps. Hsin Yang Fortune, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, Leodora, P. Ivory Pearl, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Gan Lin Beauty Hsiung, P. Shu Long Spotted Deer, Dtps. Shu Long Pearl	
		Extra long(>20)		Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun'	
3. (* QN (a)	Leaf: width (cm)	Narrow (< 3.0)	1	--	MS
		Medium (3.0- 6.0)	3	P. Amabilis, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Big White Pink Stripe, P. Medium Pink, Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta	
		Broad (>6.0)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, Leodora, P. Magic Kiss, Goldie, P. Ivory pearl, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long	

				Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1, Dtps. Shu Long Pearl	
4. (* PQ (+ (a)	Leaf: shape	Oblong	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, P. Chian Xen Pearl 'Cx#1' Dtps. Chin Ann Diamond 'Alisun', P. Ho's Little Caroline	VG
		Narrow obovate	3	Dtps. Shulong Sun Beauty, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Gan Lin Fairy 'GL'	
		Suborbicular	5	--	
5. (+ PQ (a)	Leaf: apex	Acute	1	P. Memoria Francis Hunter	VG
		Notched	3	Dtps. Shih Hua Long First Love	
		Obtuse	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	

6. QL (a)	Leaf: anthocyanin colouration	Absent	1	Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, P. Strawberry, P. Taida Salu, Dtps. Taida Salu Red, P. Luchia Pink, P. Jin Cheng Sun, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, Leodora, Goldie, Roxanne, P. Ivory Pearl, P. Memoria Francis Hunter, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	VG
		Present	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Hsin Yang Fortune, P. Miki Wata Nabe, Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Magic Kiss, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Chian Xen Pearl 'Cx#1' P. Ho's Little Caroline, P. Shu Long Spotted Deer	
7. (+) PQ (b)	Inflorescence type	Solitary	1	--	VS
		Raceme	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Panicle	5	--	
8. (* (+) QN (b)	Rachis length (cm)	Short (<10)	3	Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis., Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, P. Little Gem Stripe, P. Surf Song, P. Timothy	MS

				Christopher Dtps. Happy UFO, Leodora, Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, , Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Medium (10 - 20)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Taida Salu Red, P. Luchia Pink, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, Goldie, Dtps. Leopard Princess M611, Dtps. Chin Ann Diamond 'Alisun', Taida Salu Red, P. Strawberry, P. Miki Wata Nabe, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Long (>20)	7	--	
9. (* QN (b)	Inflorescence: number of flowers	Few (<5)	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, Dtps. Shih Hua Long First Love, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1'	MS
		Medium (5-10)	5	Dtps. Hsin Yang Fortune, P. Strawberry, Dtps. Tying Shin Zebra, P. Luchia Pink, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, Leodora, P. Magic Kiss, Goldie, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Shu Long Pearl, Dtps. Chin Ann Diamond 'Alisun', Taida Saln. Red	
		Many (>10)	7	Dtps. Younghome Orange Lip, Dtps. Taida Salu Red, P. Big White Pink Stripe, P. Medium Pink.	
10. (* QN (b)	Peduncle: length (cm)	Short (<10)	3	--	MS
		Medium (10 - 20)	5	Dtps. Mount Lip Taisuco, P. Amabilis, P. Strawberry, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Sin Yuan Golden Beauty, P. Surf Song, P. Big White Pink Stripe, P. Medium Pink, Leodora, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Leopard Princess M611, P. Ho's Little Caroline	
		Long (>20 - 30)	7	Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, P. Champion Porter, , Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Dtps. Taida Salu Red, , P. Jin Cheng	

				Sun, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Timothy Christopher Dtps. Happy UFO, P. Magic Kiss, Roxanne, P. Ivory pearl, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Taida Saln. Red	
		Extra long(>30)	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Luchia Pink, Dtps. Lian Her Happy, Goldie, P. Lucyna, P. Carlotta, Dtps. Shu Long Pearl, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Chin Ann Diamond 'Alisun'	
11. QN (b)	Peduncle: thickness (cm)	Thin (<0.3)	3	--	MS
		Medium (0.3 - 0.6)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
		Thick (>0.6)	7	Dtps. Gan Lin Fairy 'GL', P. Chian Xen Pearl 'Cx#1', Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun'	
12. QL (b)	Peduncle: a n-thocyanin colouration	Absent	1	Dtps. Mount Lip Taisuco, P. Amabilis, P. Surf Song, P. Big White Pink Stripe, P. Leodora, P. Goldie, P. Roxanne, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', Dtps. Gan Lin Diamond, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Shu Long Pearl.	VG
		Present	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her	

				Happy, P. Timothy Christopher, Dtps. Happy UFO, P. Medium Pink, P. Magic Kiss, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder P. Carlotta, P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1'	
13. QL (b)	Flower: texture of the surface of sepals and petals	Smooth	1	P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1'	VG
		Rough	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Leodora, Goldie, Dtps. Gan Lin Beauty Hsiung, P. Ho's Little Caroline, Dtps. Gan Lin Fairy 'GL', Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl.	
14. (*) (+) QN (c)	Flower: length in front view (cm)	Short (<4)	3	--	MS
		Medium (4-8)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Brother Girl, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
		Long (>8)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Kaleidoscope, P. Luchia Pink, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Roxanne, P. Ivory pearl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Chian Xen Pearl 'Cx#1',	

				P. Shu Long Spotted Deer, Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung	
15. (* (+ QN (c)	Flower: width in front view (cm)	Narrow (<4)	3	--	MS
		Medium (4-8)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Brother Girl, P. Carlotta, P. Ho's Little Caroline, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl, Dtps. Leopard Princess M611	
		Broad (>8)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Roxanne, P. Ivory Pearl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1'	
16. (* (+ PQ (b)	Flower: arrangement of petals	Open	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VG
		Touching	3	P. Strawberry, Dtps. Ox Prince Thunder, Dtps. Shulong Sun Beauty	
		Overlapping	5	--	
17. QL	Flower: fragrance	Absent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang	VS

				Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Present	9	P. Surf Song, P. Leodora, Goldie, Dtps. Acker's Sweetie	
18. (* QN (c)	Dorsal sepal: length (cm)	Short (<3)	3	P. Strawberry, Dtps. Tying Shin Zebra, P. Leodora, Goldie, P. Carlotta, P. Ho's Little Caroline, Dtps. Leopard Princess M611	MS
		Medium (3-4)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco P. Champion Porter, P. Amabilis, Dtps. Shih hua long first love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, Dtps. Sogo Soft, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
		Long (>4)	7	Dtps. Big Red Robe, P. Miki Wata Nabe, P. Luchia Pink, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Roxanne, P. Ivory Pearl, Dtps. Acker's Sweetie, P. Memoria Francis Hunter, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Chian Xen Magpie	
19. (* QN (c)	Dorsal sepal: width (cm)	Narrow (<2)	3	Dtps. Tying Shin Zebra, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Ho's Little Caroline	MS
		Medium (2-4)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia	

				Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl, Taida Salu Red	
		Broad (>4)	7	--	
20. (* (+) PQ	Dorsal sepal: shape	Oblong	1	--	
		Ovate	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VG
		Elliptic	5	Dtps. Hsin Yang Fortune, P. Amabilis, Dtps. Tying Shin Zebra, Medium pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna	
		Obovate	7	--	
		Round	9	--	
21. (* PQ	Dorsal sepal: curvature of longitudina l axis	Incurved	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis	VG

				Hunter, Dtps. Ox Prince Thunder , Dtps. Leopard Princess M611, Dtps. Shulong Sun Beauty, P. Shu Long Spotted Deer, Dtps. Shu Long Pearl	
		Straight	3	P. Medium Pink	
		Reflexed	5	P. Taida Salu, P. Jin Cheng Sun, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1'	
22. (* PQ	Dorsal sepal: undulation of margin	Absent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VG
		Present	9	Dtps. Acker's Sweetie, Dtps. Shulong Sun Beauty	
23. QN (d)	Dorsal sepal: number of colours	One	1	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, P. Luchia Pink, P. Sin Yuan Golden Beauty, P. Memoria Francis Hunter	VG
		Two	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond	

				'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Three or more	5	Dtps. Lian Her Happy Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Diamond, Dtps. Chian Xen Magpie	
24. QL (d)	Dorsal sepal: colour pattern	Uniform	1	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Amabilis, P. Luchia Pink, P. Ivory pearl, P. Memoria Francis Hunter	VS
		Shaded	2	Dtps. Acker's Sweetie, P. Miki Wata Nabe, Dtps. Shih Hua Long First Love, Dtps. Taida Salu Red, P. Jin Cheng Sun, Dtps. Lian Her Happy, P. Roxanne, Dtps. Ox Prince Thunder Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1'	
		Edged	3	Dtps. Big Red Robe, P. Strawberry P. Carlotta	
		Striped	4	P. kaleidoscope	
		Netted	5	Dtps. Tying Shin Zebra, P. Sin Yuan Golden Beauty	
		Spotted	6	Dtps. Plum Rose x Ox Black Jack, P. Champion Porter, P. Surf Song, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, Dtps. Gan Lin Fairy 'GL', Dtps. Shulong Sun Beauty, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Shu Long Pearl	
		Mixed (specify)	7	P. Big White Pink Stripe (Shaded and striped), P. Taida Salu, P. Little Gem Stripe, P. Timothy Christopher Dtps. Happy UFO, P. Brother Girl, Dtps. Chian Xen Magpie (Striped and spotted), P. Medium Pink (Edged and striped)	
25. QL (d)	Dorsal sepal: dominant colour as per RHS colour chart	Green	1	--	VS
		White	2	P. Kaleidoscope, P. Miki Wata Nabe, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie	
		Pink	3	--	
		Yellow	4	Dtps. Taida Salu Red, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love	
		Red	5	--	
		Purple	6	P. Strawberry, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
26. QN (c)	Lateral sepal: length (cm)	Short (<3)	3	P. Strawberry	MS
		Medium (3-4)	5	Dtps. Taida Salu Red, P. Kaleidoscope, Dtps. Shih Hua Long First Love	
		Long (>4)	7	P. Miki Wata Nabe, Dtps. Hsin Yang Fortune, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
27.	Lateral	Narrow (<2)	3	P. Strawberry	MS

QN (c)	sepal: width	Medium (2-4)	5	Dtps. Taida Salu Red, P. Kaleidoscope, P. Miki Wata Nabe, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Broad (>4)	7	--	
28. (+) PQ	Lateral sepal: shape	Oblong	1	--	VG
		Ovate	3	Dtps. Taida Salu Red, P. Strawberry, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Elliptic	5	P. Kaleidoscope, P. Miki Wata Nabe	
		Obovate	7	--	
		Round	9	--	
29. QL (d)	Lateral sepal: Number of colours	One	1	Dtps. Mount Lip Taisuco, P. Amabilis	MS
		Two	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory Pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Three or more	5	Dtps. Tying Shin Zebra Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Gan Lin Diamond Dtps. Chian Xen Magpie	
30. QL (d)	Lateral sepal: colour pattern	Uniform	1	Dtps. Mount Lip Taisuco	VG
		Shaded	2	Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Chian Xen Pearl 'Cx#1'	
		Edged	3	--	
		Striped	4	--	
		Netted	5	--	
		Spotted	6	P. Champion Porter, P. Surf Song, P. Magic Kiss, Goldie, P. Lucyna, Dtps. Sogo Soft, Dtps. Shu Long Pearl	

		Mixed (specify)	7	Dtps. Plum Rose x Ox Black Jack (spotted and edged), Dtps. Younghome Orange Lip (evenly colored and spotted at the base), Dtps. Acker's Sweetie (shaded and spotted), Dtps. Hsin Yang Fortune (evenly colored and spotted at the base), Dtps. Big Red Robe (spotted and edged), P. Miki Wata Nabe (shaded and spotted at the base), P. Amabilis (evenly colored and spotted at the base), P. Strawberry (edged and spotted), Dtps. Shih Hua Long First Love (one half evenly colored and other half shaded and spotted), P. Taida Salu (striped and spotted), Dtps. Tying Shin Zebra (netted and spotted), Dtps. Taida Salu Red (shaded and spotted), P. Kaleidoscope (shaded, striped and spotted), P. Luchia Pink (netted and spotted), P. Jin Cheng Sun (evenly coloured and shaded at the base), P. Sin Yuan Golden Beauty (netted and spotted), Dtps. Chian Xen Magpie (netted and spotted), P. Little Gem Stripe (striped and spotted), Dtps. Lian Her Happy (shaded and spotted), P. Timothy Christopher Dtps. Happy UFO (striped and spotted), P. Big White Pink Stripe (shaded, striped and spotted), P. Medium Pink (striped, spotted and edged), P. Leodora (shaded and spotted), P. Roxanne (shaded and spotted), P. Ivory pearl (evenly colored and spotted at the base), P. Brother Girl (striped and spotted), P. Memoria Francis Hunter (evenly colored and shaded at the base), P. Carlotta (Edged and spotted), Dtps. Gan Lin Fairy 'GL' (shaded and spotted), P. Shu Long Spotted Deer (shaded and spotted), P. Ho's Little Caroline (shaded and spotted), Dtps. Gan Lin Beauty Hsiung (shaded and spotted), Dtps. Chin Ann Diamond 'Alisun' (shaded and spotted), Dtps. Gan Lin Diamond (shaded and spotted), Dtps. Shulong Sun Beauty (shaded and spotted)	
31. QL (d)	Lateral sepal: dominant colour as per RHS colour chart	Green	1	--	VG
		White	2	P. Kaleidoscope, P. Miki Wata Nabe, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie	
		Pink	3	--	
		Yellow	4	Taida Salu Red, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love	
		Red	5	--	
		Purple	6	P. Strawberry, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
32. (+)	Petal: shape	Oblong	1	--	VS
		Elliptic	3	--	

PQ		Ovate	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Sub-orbicular	7	Dtps. Hsin Yang Fortune, P. Amabilis, Dtps. Tying Shin Zebra, P. Medium Pink, P. Magic Kiss, Goldie, P. Leodora, P. Lucyna, Dtps. Leopard Princess M611, Dtps. Sogo Soft., Dtps. Shih Hua Long First Love	
33. (* QN (c)	Petal: length (cm)	Short (<3.0)	3	Dtps. Younghome Orange Lip, P. Amabilis, P. Strawberry, P. Medium Pink, P. Magic Kiss, Goldie, P. Leodora, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline	MS
		Medium (3.0-4.5)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Champion Porter, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Dtps. Sogo Soft, Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Long (>4.5)	7	P. Miki Wata Nabe, Dtps. Tying Shin Zebra, P. Surf Song, P. Ivory pearl	
34. (* QN (c)	Petal: width (cm)	Narrow (<3.0)	3	P. Medium Pink, P. Magic Kiss, Goldie, P. Leodora, Dtps. Tying Shin Zebra, P. Lucyna, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline	MS
		Medium (3.0-4.5)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Champion Porter,	

				P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, P. Surf Song, P. Timothy Christopher dtps. happy UFO, P. Big White Pink Stripe, Dtps. Sogo Soft, Dtps. Shu Long Pearl	
		Broad (>4.5)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, , P. Luchia Pink, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1'	
35. (* (+) PQ	Petal: curvature of longitudina l axis	Incurved	1	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Ivory pearl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Shulong Sun Beauty, Dtps. Sogo Soft	VG
		Straight	3	Dtps. Plum Rose x Ox Black Jack, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih hua long first love, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Luchia Pink, P. Surf Song, P. Medium Pink, Goldie, P. Roxanne, Taida Salu. Red	
		Reflexed	5	P. Taida Salu, Taida salu red, P. Jin Cheng Sun, P. Timothy Christopher Dtps. Happy UFO, P. Magic Kiss, P. Leodora, P. Lucyna, P. Brother Girl, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
36. PQ	Petal: undulation of margin	Absent	1	Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung, Taida Saln. Red	VG
		Present	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem	

				Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
37. QL (d)	Petal: number of colors	One	1	Dtps. Younghome Orange Lip, Dtps. Big Red Robe, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Amabilis, P. Luchia Pink, P. Sin Yuan Golden Beauty, P. Surf Song, P. Ivory pearl	VG
		Two	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, P. Miki Wata Nabe, P. Champion Porter, Dtps. Shih Hua Long First Love, P. Strawberry, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Little Gem Stripe, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Three or more	5	Dtps. Lian Her Happy, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung, Dtps. Chian Xen Magpie	
38. (* QL (d)	Petal: color pattern	Uniform	1	Dtps. Younghome Orange Lip, Dtps. Mount Lip Taisuco, Dtps. Hsin Yang Fortune, P. Amabilis, P. Ivory pearl	VG
		Shaded	2	P. Miki Wata Nabe, P. Roxanne, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Chian Xen Pearl 'Cx#1'	
		Edged	3	P. Strawberry, P. Carlotta	
		Striped	4	--	
		Netted	5	P. Luchia Pink, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie	
		Spotted	6	P. Champion Porter, P. Surf Song, P. Magic Kiss, Goldie, P. Lucyna, Dtps. Shulong Sun Beauty, Dtps. Sogo Soft, Dtps. Shu Long Pearl.	
		Mixed (specify)	7	Dtps. Plum Rose x Ox Black Jack (shaded and spotted), Dtps. Acker's Sweetie (evenly colored and shaded at the base), Dtps. Big Red Robe (netted and edged), Dtps. Shih Hua Long First Love (shaded and spotted at the base and evenly colored), P. Taida Salu (netted and spotted), Dtps.	

				Lian Her Happy (shaded and spotted), Dtps. Tying Shin Zebra (netted and shaded at the base), Dtps. Taida Salu Red (shaded and spotted), P. kaleidoscope (striped and netted), P. Jin Cheng Sun (shaded and spotted), P. Little Gem Stripe (netted and spotted), P. Timothy Christopher Dtps. Happy UFO (netted and spotted), P. Big White Pink Stripe (shaded and netted), P. Medium Pink (netted and edged), P. Leodora (shaded and spotted) P. Brother Girl (netted, spotted and edged), P. Memoria Francis Hunter (evenly colored and spotted) Dtps. Gan Lin Fairy 'GL' (shaded and spotted), P. Shu Long Spotted Deer (shaded and spotted), P. Ho's Little Caroline (shaded and netted), Dtps. Gan Lin Beauty Hsiung (shaded and spotted), Dtps. ChinAnn Diamond 'Alisun' (shaded and spotted), Dtps. Gan Lin Diamond (shaded and spotted),	
39. (* QL (d)	Petal: predominant colour as per RHS colour chart	Green	1	--	VS
		White	2	P. Kaleidoscope, P. Miki Wata Nabe, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie	
		Pink	3	--	
		Yellow	4	Dtps. Taida Salu Red, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love	
		Red	5	--	
		Purple	6	P. Strawberry, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
40. QN (c)	Lip: length of apical lobe (cm)	Short (<1)	3	--	MG
		Medium (1-2)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Memoria Francis Hunter, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl, Taida Saln. Red	
		Long (>2)	7	Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Luchia Pink, Dtps. Lian Her Happy, P. Roxanne, P. Ivory pearl, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Chian Xen Pearl 'Cx#1', P. Shu Long Spotted Deer,	

				Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung	
41. QN (c)	Lip: width of apical lobe (cm)	Narrow (<1)	3	--	MG
		Medium (1-2)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory Pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
		Broad (>2)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Amabilis, P. Luchia Pink, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, Dtps. Lian Her Happy, P. Big White Pink Stripe, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Chian Xen Pearl 'Cx#1', P. Shu Long Spotted Deer, Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung	
42. (+) PQ (c)	Lip: presence of whiskers	Absent	1	P. Surf Song, P. Leodora, P. Goldie	VG
		Present	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
43. PQ (c)	Lip: length of whiskers relative to length of	Smaller	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P.	VG

	apical lobe			Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher, Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Equal	5	P. Ivory Pearl	
		Larger	7	--	
44. (* (+) PQ	Lip: shape of apical lobe	Ovate	1	P. Ho's Little Caroline	VS
		Elliptic	2	Dtps. Hsin Yang Fortune, Dtps. Tying Shin Zebra, P. Surf Song, P. Goldie, P. Carlotta	
		Obovate	3	--	
		Semi-circular	4	--	
		Deltoid	5	P. Leodora	
		Obdeltoid	6	P. Champion Porter, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder	
		Rhombic	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Amabilis, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, , Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl, P. Strawberry	
Orbicular	8	--			
45. (* (+)	Lip: bump and ridge on apical	Absent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, Dtps. Shih Hua Long First Love, P.	VG

PQ	lobe			Amabilis, P. Luchia Pink, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Medium Pink, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Shu Long Spotted Deer, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung	
		Present	9	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, P. Champion Porter, P. Strawberry, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
46. (+) PQ	Lip: shape of lateral lobe	Semi-circular	1	P. Leodora	VG
		Oblong	3		
		Ob lanceolate	5	Dtps. Tying Shin Zebra, P. Surf Song	
		Obtriangle	7	Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, P. Champion Porter, P. Taida Salu, P. Kaleidoscope, P. Little Gem Stripe, P. Timothy Christopher Dtps. Happy UFO, P. Magic Kiss, Goldie, P. Lucyna, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft	
		Sub-orbicular	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Amabilis, P. Strawberry, Dtps. Taida Salu Red, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Medium Pink, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl.	
47. (+) PQ	Lip: curvature of lateral lobe	Slightly incurved	3	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, P. Miki Wata Nabe, P. Amabilis, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P.	VG

				Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Chian Xen Pearl 'Cx#1', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung.	
		Strongly incurved	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Luchia Pink, P. Little Gem Stripe P. Lucyna, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
48. PQ (c)	Lip: size of lateral lobe relative to apical lobe	Smaller	3	Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl.	VS
		Equal	5	Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Luchia Pink.	
		Larger	7	Dtps. Plum Rose x Ox Black Jack, P. Medium Pink	
49. QL	Lip: number of	One	1	--	VG
		Two	3	--	

(d)	colours	Three or more	5	Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, P. Taida Salu, Dtps. Taida Salu Red, P. Luchia Pink, P. Jin Cheng Sun, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, Goldie, P. Lucyna, Brother Girl, P. Memoria Francis Hunter, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Leodora, P. Roxanne, P. Ivory pearl, Dtps. Ox Prince Thunder, Dtps. Sogo Soft, Dtps. Shu Long Pearl	
50. (* QL (d)	Lip: color pattern of apical lobe	Uniform	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, P. Champion Porter, P. Strawberry, P. Big White Pink Stripe, P. Medium Pink, P. Brother Girl, P. Carlotta, Dtps. Gan Lin Fairy 'GL'	VG
		Shaded	2	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Amabilis, , Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Leodora, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Edged	3	P. Timothy Christopher Dtps. Happy UFO	
		Striped	4	--	
		Netted	5	--	
		Spotted	6	P. Surf Song, Goldie, P. Lucyna, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond.	
		Mixed (specify)	7	--	
51. (*)	Lip: predominant	Green	1	--	VG
		White	2	P. Miki Wata Nabe, P. Miki Wata Nabe	

QL (d)	t colour of apical lobe as per RHS colour chart	Pink	3	--	
		Yellow	4	P. Memoria Francis Hunter	
		Red	5	Dtps. Hsin Yang Fortune	
		Purple	6	Dtps. Taida Salu Red, P. Kaleidoscope, P. Strawberry, Dtps. Shih Hua Long First Love, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
52. (* QL (d)	Lip: colour pattern of lateral lobe	Uniform	1	--	VG
		Shaded	2	Dtps. Lian Her Happy, P. Roxanne, P. Ivory pear, P. Memoria Francis Hunter, Dtps. Leopard Princess M611, Dtps. Shulong Sun Beauty, P. Shu Long Spotted Deer, Dtps. Sogo Soft.	
		Edged	3	--	
		Striped	4	--	
		Netted	5	--	
		Spotted	6	--	
		Mixed (specify)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl (Shaded and spotted)	
53. (* QL	Lip: dominant colour of lateral lobe as per RHS colour chart	Green	1	--	VS
		White	2	P. Miki Wata Nabe	
		Pink	3	--	
		Yellow	4	P. Memoria Francis Hunter	
		Red	5	--	
		Purple	6	Dtps. Taida Salu Red, P. Kaleidoscope, P. Strawberry, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	

		Violet	8	--	
54. (+) PQ	Lip: callus	Prominent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VS
		Flat	9	--	
55. PQ	Lip: pubescence	Absent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory Pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VS
		Present	9	--	
56. QN (c)	Column: length (cm)	Short (<0.5)	3	--	MS
		Medium (0.5-1.0)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, Dtps. Big Red Robe, P. Miki Wata Nabe, Dtps. Shih Hua Long First Love, P.	

				Taida Salu, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Luchia Pink, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Kaleidoscope, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Roxanne, P. Lucyna, Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Long (>1.0-1.5)	7	P. Jin Cheng Sun, P. Magic Kiss, P. Leodora, Goldie, P. Ivory Pearl, P. Carlotta, Dtps. Chin Ann Diamond 'Alisun'	
		Extra long(>1.5)	9	--	
57. (* QL (e)	Column: colour as per RHS colour chart	Green	1	--	VS
		White	2	Dtps. Taida Salu Red, P. Kaleidoscope, P. Miki Wata Nabe, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie	
		Pink	3	--	
		Yellow	4	--	
		Red	5	--	
		Purple	6	P. Strawberry, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
58. QN	Flower longevity on the plant (days)	Short (<15)	3	P. Strawberry, P. Memoria Francis Hunter.	VS
		Medium (15-30)	5	P. Lucyna, Dtps. Younghome Orange Lip, P. Ivory Pearl, Dtps. Plum Rose x Ox Black Jack	
		Long (>30)	7	Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Timothy Christopher Dtps. Happy UFO, P. Surf Song, P. Medium Pink, P. Leodora, Dtps. Ox Prince Thunder, P. Jin Cheng Sun, P. Magic Kiss, P. Little Gem Stripe, Dtps. Hsin Yang Fortune, P. Kaleidoscope, P. Miki Wata Nabe, Dtps. Chian Xen Magpie	

VIII. Explanation on the Table of Characteristics

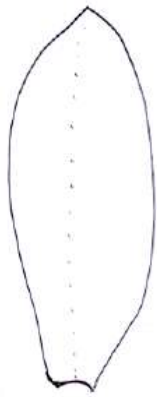
8.1 Guidelines for recording the observations of vegetative and flowering characteristics

Characteristics indicated with (a), (b), (c), (d) and (e) in the first column of the Table of Characteristics should be examined as indicated below:

- (f) Observations on the leaf should be made on the longest leaf of flowering plant..
- (g) Observations on the inflorescence and the flower shall be made at the time when 50% of the flowers on the inflorescence have opened and the most recently fully opened flower on the inflorescence before the color starts to fade.
- (h) Observations on the length and width of the flower and parts of the flower shall be made on the spread out positions.
- (i) Observations on the color of the sepal, the petal and the lip shall be made on inner side at apex, mid and base portion.
- (j) Observations on the colour of column shall be made on inner side at apex, mid and basal region.

8.2 Explanation for individual characteristics

Charcteristic 4: Leaf shape



1
Oblong



3
Narrow obovate



5
Suborbicular

Charcteristic 5: Leaf apex



1
Acute



3
Notched



5
Obtuse

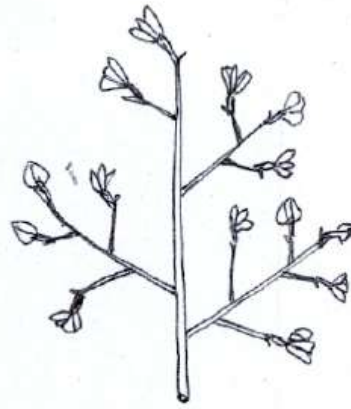
Charcteristic 7: Inflorescence type



1
Solitary

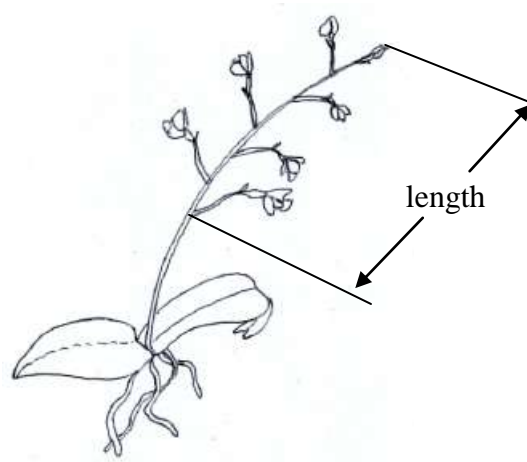


3
Raceme



5
Panicle

Charcteristic 8: Rachis length

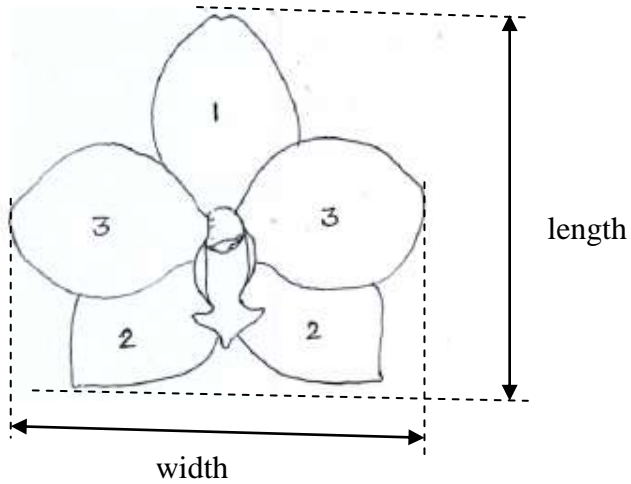


Charcteristics 14 &15: Flower: length (14) & width (15) in front view

1: Dorsal sepal

2: Lateral sepal

3: Petal



Charcteristic 16: Flower arrangement of petals



1
Open



3
Touching

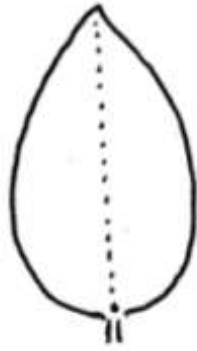


5
Overlapping

Charcteristics 20 & 28: Shape of Dorsal sepal (20) and Lateral sepal (28)



1
Linear



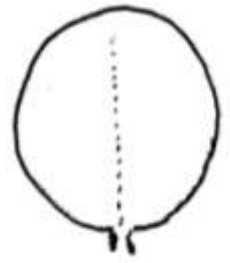
3
Ovate



5
Elliptic



7
Obovate



9
Round

Charcteristics 21 & 35: Curvature of Dorsal sepal (21) and petal (35)



1
Incurved



3
Straight

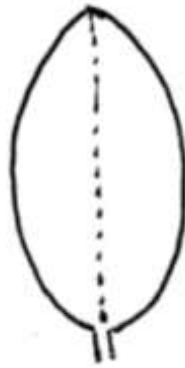


5
Reflexed

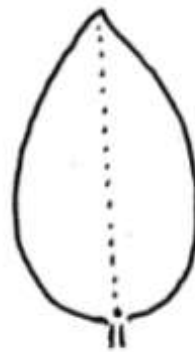
Charcteristics 32: Petal shape



1
Oblong



3
Elliptic

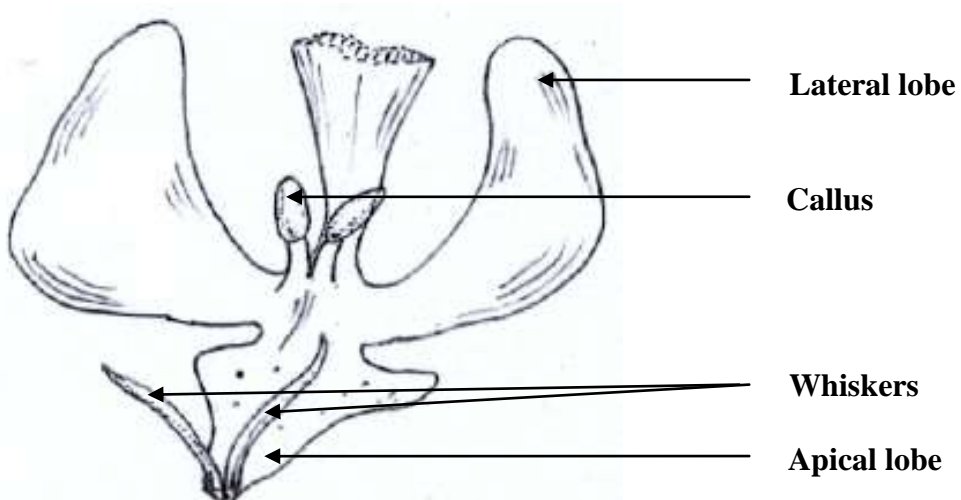


5
Ovate



7
Suborbicular

Charcteristics 42 and 54: Lip: presence of whiskers (42) and callus (54)



Charcteristic 44: Lip: shape of apical lobe



1
Ovate



2
Elliptic



3
Obovate



4
Semi circular



5
Deltoid



6
Obdeltoid

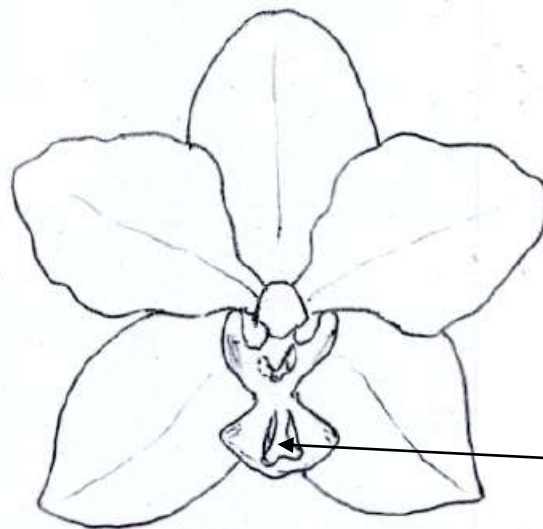


7
Rhombic



8
Orbicular

Charcteristics 45: Lip: bump and ridge on apical lobe



Bump and ridge

Charcteristic 46: Lip: shape of lateral lobe



1
Semi circular



3
Oblong



5
Oblanceolate



7
Obtriangular



9
Sub orbicular

Charcteristic 47: Lip: Curvature of lateral lobe



3
Slightly incurved



7
Strongly incurved

IX. Name of DUS Test Centres

Nodal DUS test Centre	Other Test Centre
College of Horticulture, Kerala Agricultural University, Trichur	1. National Research Centre for Orchids, Pakyong-737106, Sikkim 2. Department of Floriculture and Landscaping Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan, Himachal Pradesh

PUBLIC NOTICE

Sub: Advertisement is given under sub-section (2) and (3) of Section 21 of the Protection of Plant Varieties and Farmers' Rights Act, 2001 for registration of farmers' variety [Section 2(j)(ii)] read with Rules 30 and 31 of PPV & FR Rules, 2003

It is hereby advertised that the application (s) for registration of farmers' varieties (falling within the definition of extant variety) listed herein have been accepted by the Registrar, Protection of Plant Varieties & Farmers' Rights Authority. The passport data of each variety furnished by the applicant are herewith advertised as specified for calling objections from the interested persons in the matter.

The place or places where the specimen of the variety may be inspected can be obtained in writing from the Registrar of the PPV & FR Authority.

Any person may, within three months from the date of advertisement of the application(s) give notice of opposition in writing to the registration of variety (as per Form PV-3 of the First Schedule of PPV&FR Rules, 2003). Oppositions, if any, to the registration must be submitted, in triplicate, to the Registrar, PPV&FRA, NASC Complex, DPS Marg, New Delhi -110 012 accompanied with the fee of Rs.1,500/- (Rupees One Thousand and Five Hundred Only) by way of Demand Draft drawn in favour of "The Registrar, PPV & FR Authority" payable at New Delhi.

FORM O - 1

(See Rule 30)

**Government of India, Plant Varieties Registry
Advertisement of accepted application for registration**

01. Application No.

F2	OS45	09	363
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 filed on **01/09/2009** by **Director of Research, CSK HP Krishi Vishvavidyalaya, Palampur, H.P. 176062** on behalf of **Shri Nehar Singh, R/o Village Shirotkhala, P.O. Laloti, Tehsil Chirgaon, Subdivision Rohru, District Shimla H.P.** for a **Farmers' variety** of crop **Rice** [*Oryza sativa* L.] having denomination **CHHOHARTU**, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----NA -----on ----- NA -----.

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in ---NA-----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers' Rights Rules,2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

Passport data of the variety CHHOHARTU:

Applicant : Nehar Singh
Address of the Applicant : R/o Village Shirotkhala, P.O. Laloti, Tehsil Chirgaon, Subdivision Rohru, District Shimla H.P.
Nationality of Applicant : Indian
Application details
a. Number :

F2	OS45	09	363
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b. Date of receipt : 01.09.2009
c. Date of acceptance : 11.10.2012
Crop (Taxonomical Lineage) : Rice [*Oryza sativa* L.]
Denomination : CHHOHARTU
Type of Variety : Farmers' variety
Classification of Variety : Typical
Previously proposed Denomination : Not applicable

Name of Parental Material : NA
Name of Reference Varieties : CSR 10
Variety Description:

A. Group Characteristics	Remarks measured values, example varieties, etc.
Basal leaf: Sheath colour	Green
Ear: Time of emergence (first spikelet visible on 50% of ears)	Early
Stem: Length (excluding panicles; excluding floating rice)	Very short
Decorticated grain: Length	Short
Decorticated grain: Shape (in lateral view)	Short bold
Decorticated grain: Colour	Red
Endosperm: Content of amylose	Medium
Decorticated grain: Aroma	Absent
B. Distinct Characteristics: CHHOHARTU has distinguishing characters like red colour of decorticated grains.	
C. Reference varieties: 1. CSR 10 has distinguishing characters like white colour of decorticated grains.	
D. Date of commercialization of the variety	---

E. Photographs: (Figures 1a and 1b)

02. Application No.

F3	OS74	09	501
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 filed on 12/11/2009 by Shri P.V. Suresh, Secretary, SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121 on behalf of SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121 for a Farmers' variety of crop Rice [*Oryza sativa* L.] having denomination CHOMALA, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----NA -----on ----- NA -----.

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in ---NA-----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers' Rights Rules, 2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

Passport data of the variety CHOMALA:

Applicant : SEED CARE
Address of the Applicant : C/o M.S. Swaminathan Research Foundation
 Community Agrobiodiversity Centre, Puthoorvayal
 P.O., Lalpetta, Wayanad, Kerala-673121
Nationality of Applicant : Indian
Application details
 a. Number :

F3	OS74	09	501
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 b. Date of receipt : 12.11.2009
 C. Date of acceptance : 15.10.2012
Crop (Taxonomical Lineage) : Rice [*Oryza sativa* L.]
Denomination : CHOMALA
Type of Variety : Farmers' variety
Classification of Variety : Typical
Previously proposed : Not applicable
Denomination

Name of Parental Material : NA
Name of Reference Varieties : Nidhi

Variety Description:

A. Group Characteristics	Remarks measured values, example varieties, etc.
Basal leaf: Sheath colour	Green
Ear: Time of emergence (first spikelet visible on 50% of ears)	Medium
Stem: Length (excluding panicles; excluding floating rice)	Short
Decorticated grain: Length	Medium
Decorticated grain: Shape (in lateral view)	Short bold
Decorticated grain: Colour	Red
Endosperm: Content of amylose	High
Decorticated grain: Aroma	Absent

B. Distinct Characteristics:
CHOMALA has distinguishing characters like absence of awns, well exerted panicles, straw colour of sterile lemma and short bold decorticated grains.

C. Reference varieties:	
1. Nidhi has distinguishing characters like presence of awns, mostly exerted panicles, gold colour of sterile lemma and long slender decorticated grains.	
D. Date of commercialization of the variety	---

E. Photographs: (Figures 2a and 2b)

03. Application No.

F4	OS75	09	502
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 filed on 12/11/2009 by **Shri P.V. Suresh, Secretary, SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121** on behalf of **SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121** for a **Farmers' variety** of crop **Rice** [*Oryza sativa* L.] having denomination **JEERAKASALA**, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----NA -----on ----- NA -----.

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in ---NA-----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers' Rights Rules,2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

Passport data of the variety JEERAKASALA:

Applicant : SEED CARE
Address of the Applicant : C/o M.S. Swaminathan Research Foundation
Community Agrobiodiversity Centre, Puthoorvayal
P.O., Lalpetta, Wayanad, Kerala-673121
Nationality of Applicant : Indian
Application details
a. Number :

F4	OS75	09	502
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b. Date of receipt : 12.11.2009
c. Date of acceptance : 15.10.2012
Crop (Taxonomical Lineage) : Rice [*Oryza sativa* L.]
Denomination : JEERAKASALA

Type of Variety : Farmers' variety
Classification of Variety : Typical
Previously proposed : Not applicable
Denomination

Name of Parental Material : NA
Name of Reference Varieties : Remanika and Mukthi

Variety Description:

A. Group Characteristics	Remarks measured values, example varieties, etc.
Basal leaf: Sheath colour	Green
Ear: Time of emergence (first spikelet visible on 50% of ears)	Medium
Stem: Length (excluding panicles; excluding floating rice)	Short
Decorticated grain: Length	Medium
Decorticated grain: Shape (in lateral view)	Short Slender
Decorticated grain: Colour	White
Endosperm: Content of amylose	Medium
Decorticated grain: Aroma	Present
B. Distinct Characteristics: JEERAKASALA has distinguishing characters like short stem length, short panicle length of main axis, well exerted panicle and aromatic decorticated grains.	
C. Reference varieties: 1. Remanika has distinguishing characters like very short stem length, medium sized panicles, mostly exerted panicles and aromatic decorticated grains absent. 2. Mukthi has distinguishing characters like very short stem length, medium sized panicles, mostly exerted panicles and aromatic decorticated grains absent.	
D. Date of commercialization of the variety	---

E. Photographs: (Figures 3a and 3b)

04. Application No.

F5	OS76	09	503
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 filed on 12/11/2009 by Shri P.V. Suresh, Secretary, SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad,

Kerala-673121 on behalf of **SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121** for a **Farmers' variety** of crop **Rice** [*Oryza sativa* L.] having denomination **GANDHAKASALA**, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----NA -----on ----- NA -----.

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in ---NA-----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers' Rights Rules,2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

Passport data of the variety GANDHAKASALA:

Applicant : SEED CARE
Address of the Applicant : C/o M.S. Swaminathan Research Foundation
Community Agrobiodiversity Centre, Puthoorvayal
P.O., Lalpetta, Wayanad, Kerala-673121
Nationality of Applicant : Indian
Application details
a. Number :

F5	OS76	09	503
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b. Date of receipt : 12.11.2009
c. Date of acceptance : 15.10.2012
Crop (Taxonomical Lineage) : Rice [*Oryza sativa* L.]
Denomination : GANDHAKASALA
Type of Variety : Farmers' variety
Classification of Variety : Typical
Previously proposed : Not applicable
Denomination

Name of Parental Material : NA
Name of Reference Varieties : Remanika

Variety Description:

A. Group Characteristics	Remarks measured values, example varieties, etc.
Basal leaf: Sheath colour	Green
Ear: Time of emergence (first spikelet visible on 50% of ears)	Medium
Stem: Length (excluding panicles; excluding floating rice)	Very short

Decorticated grain: Length	Short
Decorticated grain: Shape (in lateral view)	Short bold
Decorticated grain: Colour	Light brown
Endosperm: Content of amylose	Medium
Decorticated grain: Aroma	Absent
B. Distinct Characteristics: GANDHAKASALA has distinguishing characters like well exerted panicles and narrow width of decorticated grain.	
C. Reference varieties: 1. Remanika has distinguishing characters like mostly exerted panicles and medium width of decorticated grain.	
D. Date of commercialization of the variety	---

E. Photographs: (Figures 4a and 4b)

05. Application No.

F6	OS77	09	504
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 filed on 12/11/2009 by **Shri P.V. Suresh, Secretary, SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121** on behalf of **SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121** for a **Farmers' variety** of crop **Rice** [*Oryza sativa* L.] having denomination **CHENNELLU**, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----NA -----on ----- NA -----.

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in ---NA-----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers' Rights Rules,2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

Passport data of the variety CHENNELLU:

Applicant : SEED CARE
Address of the Applicant : C/o M.S. Swaminathan Research Foundation
 Community Agrobiodiversity Centre, Puthoorvayal
 P.O., Lalpetta, Wayanad, Kerala-673121

Nationality of Applicant : Indian

Application details

a. Number :

F6	OS77	09	504
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b. Date of receipt : 12.11.2009
c. Date of acceptance : 15.10.2012

Crop (Taxonomical Lineage) : Rice [*Oryza sativa* L.]

Denomination : CHENNELLU

Type of Variety : Farmers' variety

Classification of Variety : Typical

Previously proposed : Not applicable

Denomination

Name of Parental Material : NA

Name of Reference Varieties : PTB 5

Variety Description:

A. Group Characteristics	Remarks measured values, example varieties, etc.
Basal leaf: Sheath colour	Uniform purple
Ear: Time of emergence (first spikelet visible on 50% of ears)	Medium
Stem: Length (excluding panicles; excluding floating rice)	Short
Decorticated grain: Length	Medium
Decorticated grain: Shape (in lateral view)	Short bold
Decorticated grain: Colour	Light brown
Endosperm: Content of amylose	Medium
Decorticated grain: Aroma	Absent

B. Distinct Characteristics:

CHENNELLU has distinguishing characters like short stem length.

C. Reference varieties:

1. PTB 5 has distinguishing characters like very short stem length.

D. Date of commercialization of the variety	---
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E. Photographs: (Figures 5a and 5b)

06. Application No.

F7	OS78	09	505
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 filed on 12/11/2009 by Shri P.V. Suresh, Secretary, SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121 on behalf of SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121 for a Farmers' variety of crop Rice [*Oryza sativa* L.] having denomination VELIYAN, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----NA -----on ----- NA -----.

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in ---NA-----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers' Rights Rules,2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

Passport data of the variety VELIYAN:

Applicant : SEED CARE
Address of the Applicant : C/o M.S. Swaminathan Research Foundation
Community Agrobiodiversity Centre, Puthoorvayal
P.O., Lalpetta, Wayanad, Kerala-673121
Nationality of Applicant : Indian
Application details
a. Number :

F7	OS78	09	505
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b. Date of receipt : 12.11.2009
c. Date of acceptance : 15.10.2012
Crop (Taxonomical Lineage) : Rice [*Oryza sativa* L.]
Denomination : VELIYAN
Type of Variety : Farmers' variety
Classification of Variety : Typical
Previously proposed : Not applicable
Denomination
Name of Parental Material : NA
Name of Reference Varieties : Dinesh

Variety Description:

A. Group Characteristics	Remarks measured values, example varieties, etc.
Basal leaf: Sheath colour	Uniform purple
Ear: Time of emergence (first spikelet visible on 50% of ears)	Medium
Stem: Length (excluding panicles; excluding floating rice)	Short
Decorticated grain: Length	Medium
Decorticated grain: Shape (in lateral view)	Short bold
Decorticated grain: Colour	Red
Endosperm: Content of amylose	High
Decorticated grain: Aroma	Absent
B. Distinct Characteristics: VELIYAN has distinguishing characters like purple colour of stigma, and absence of awns.	
C. Reference varieties: 1. Dinesh has distinguishing characters like white colour of stigma, and presence of awns.	
D. Date of commercialization of the variety	---

E. Photographs: (Figures 6a and 6b)

07. Application No.

F8	OS79	09	506
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 filed on 12/11/2009 by **Shri P.V. Suresh, Secretary, SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121** on behalf of **SEED CARE, C/o M.S. Swaminathan Research Foundation Community Agrobiodiversity Centre, Puthoorvayal P.O., Lalpetta, Wayanad, Kerala-673121** for a **Farmers' variety** of crop **Rice** [*Oryza sativa* L.] having denomination **THONDI**, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----NA -----on ----- NA -----.

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in ---NA-----.

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers' Rights Rules,2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

Passport data of the variety THONDI:

Applicant : SEED CARE
Address of the Applicant : C/o M.S. Swaminathan Research Foundation
Community Agrobiodiversity Centre, Puthoorvayal
P.O., Lalpetta, Wayanad, Kerala-673121
Nationality of Applicant : Indian
Application details
a. Number :

F8	OS79	09	506
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b. Date of receipt : 12.11.2009
C. Date of acceptance : 15.10.2012
Crop (Taxonomical Lineage) : Rice [*Oryza sativa* L.]
Denomination : THONDI
Type of Variety : Farmers' variety
Classification of Variety : Typical
Previously proposed : Not applicable
Denomination

Name of Parental Material : NA
Name of Reference Varieties : PTB 26 and PTB 5

Variety Description:

A. Group Characteristics	Remarks measured values, example varieties, etc.
Basal leaf: Sheath colour	Uniform purple
Ear: Time of emergence (first spikelet visible on 50% of ears)	Medium
Stem: Length (excluding panicles; excluding floating rice)	Short
Decorticated grain: Length	Medium
Decorticated grain: Shape (in lateral view)	Short bold
Decorticated grain: Colour	Red
Endosperm: Content of amylose	Medium
Decorticated grain: Aroma	Absent

B. Distinct Characteristics: THONDI has distinguishing characters like medium amylose content in endosperm.	
C. Reference varieties: 1. PTB 26 has distinguishing characters like high amylose content in endosperm. 2. PTB 5 has distinguishing characters like high amylose content in endosperm.	
D. Date of commercialization of the variety	---

E. Photographs: (Figures 7a and 7b)

08. Application No.

F4	OS102	08	536
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 filed on 22/12/2008 by **Dr. P. S. Minhas, Director of Research, Punjab Agriculture University, Ludhiana** on behalf of **Shri Kuldeep Singh Sandhu, S/o S. Faujdar Singh Sandhu, Vill and P.O. Banur, Distt Patiala, Punjab** for a **Farmers' variety** of crop **Rice** [*Oryza sativa* L.] having denomination **MUSHKNN**, the specification includes its drawing and or photograph(s) of which are given below, has been accepted and given registration number -----NA -- -----on ----- NA -----.

The convention application no. -----NA-----, in respect of the said variety has been filed on -----NA-----, in ---NA----

Appropriate office for the opposition of proceeding under Rule 29, of the Protection of Plant Varieties and Farmers' Rights Rules,2003 is **Office of the Registrar, PPV & FR Authority, New Delhi – 110 012.**

Passport data of the variety MUSHKNN:

Applicant : Kuldeep Singh Sandhu
Address of the Applicant : S/o S. Faujdar Singh Sandhu, Vill and P.O. Banur, Distt Patiala, Punjab
Nationality of Applicant : Indian
Application details
a. Number :

F4	OS102	08	536
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b. Date of receipt : 21.12.2008
C. Date of acceptance : 10.10.2012
Crop (Taxonomical Lineage) : Rice [*Oryza sativa* L.]

Denomination : MUSHKNN
Type of Variety : Farmers' variety
Classification of Variety : Typical
Previously proposed : Not applicable
Denomination

Name of Parental Material : NA
Name of Reference Varieties : Kasturi

Variety Description:

A. Group Characteristics	Remarks measured values, example varieties, etc.
Basal leaf: Sheath colour	Green
Ear: Time of emergence (first spikelet visible on 50% of ears)	Early
Stem: Length (excluding panicles; excluding floating rice)	Short
Decorticated grain: Length	Long
Decorticated grain: Shape (in lateral view)	Long slender
Decorticated grain: Colour	Light brown
Endosperm: Content of amylose	Medium
Decorticated grain: Aroma	Present
B. Distinct Characteristics: MUSHKNN has distinguishing characters like semi erect attitude of blade of flag leaf.	
C. Reference varieties: 1. Kasturi has distinguishing characters like erect attitude of blade of flag leaf.	
D. Date of commercialization of the variety	---

E. Photographs: (Not provided)

Hkkj rh; i k'kk fdLe tjuy [kM 06] vad -11] 01 uoaj, 2012 ea
vf/kl fpr i R; k' kh fdLeka ds fp=

Photograph of candidate varieties notified in Plant Variety Journal of India,

Vol. 6, No.- 11, November 01, 2012

fp= 01%

Figure 01: Rice: CHHOHARTU



fp= 01%
Figure 01: View of grains

fp= 02%

Figure 02: Rice: CHOMALA



fp= 02%
Figure 02a: View of seed and grain



fp= 02%
Figure 02b: View of seed

fp= 03%

Figure 03: Rice: JEERAKASALA



fp= 03%
Figure 03a: View of seed and grain



fp= 03%
Figure 03b: View of seed

fp= 04%

Figure 04: Rice: GANDHAKASALA



fp= 04%

Figure 04a: View of seed and grain



fp= 04%

Figure 04b: View of seed

fp= 05%

Figure 05: Rice: CHENNELLU



fp= 05%

Figure 05a: View of seed and grain



fp= 05%

Figure 05b: View of seed

fp= 06%

Figure 06: Rice: VELIYAN



fp= 06%

Figure 06a: View of seed and grain



fp= 06%

Figure 06b: View of seed

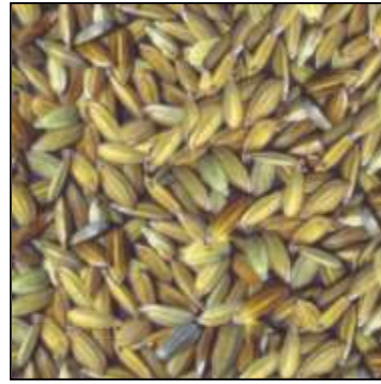
fp= 07%

Figure 07: Rice: THONDI



fp= 07%

Figure 07a: View of seed and grain



fp= 07%

Figure 07b: View of seed

PUBLIC NOTICE

Details of registration certificate for inviting claims of benefit sharing under sub section 1 of section 26 of PPV&FR Act, 2001 read with Rule 40 of PPV&FR Rules, 2003.

The details of 44 registration certificates which have been issued under section 24 (2) of PPV &FR Act, 2001 are published herein for invitation of claims for benefit sharing.

Any person or group of persons, being citizen(s) of India or firm or governmental or non-governmental organization formed or established in India shall submit their claims for benefit sharing (under Section 26 (2) of PPV&FR Act, 2001 read with Rule 41 of PPV&FR Rules, 2003) in Form PV 7 of the First schedule (in triplicate) within a period of six months from the date of publication. Claims for benefit sharing if any shall be submitted to the Deputy Registrar, PPV&FR Authority, NASC Complex, DPS Marg, New Delhi-110012 accompanied with the fee of Rs. 5000/- (Rupees Five Thousand Only) by way of Demand Draft drawn in favour of the “Registrar, PPV&FR Authority” payable at New Delhi.

Certificate of Registration No. 85 of 2012

- (1) Registration Number and date of grant:- **85 of 2012 & 02/07/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **DCH-519**
- (4) Name of:
Family: **Poaceae**
Genus: ***Triticum***
Species: ***aestivum***
- Variety and common name: **Extant/Castor**
- (5) Parentage and geographical location of the variety:-
**M-574 DCS-78 and
Directorate of Oilseeds Research, Rajendranagar, Hyderabad, A.P**
- (6) Details of the distinguishing features or the characteristics:-
Absence of leaf anthocyanin pigmentation of young emerging leaves, green colour of stem, rough surface of petiole and dense spininess of capsule.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof:
DCH-519 has been commercialized since 2006.

Certificate of Registration No. 112 of 2012

- (1) Registration Number and date of grant:- **112 of 2012 & 02/08/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-

**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**

- (3) Denomination of the variety:- **Purna(HI-1544)**

- (4) Name of:

Family: **Poaceae**
Genus: ***Triticum***
Species: ***aestivum***

Variety and common name: **Extant/Bread Wheat**

- (5) Parentage and geographical location of the variety:-

**HD 2402/HW 3007
IARI Regional Station, Indore**

- (6) Details of the distinguishing features or the characteristics:-

Parallel ear shape, absence of peduncle waxiness, absence of waxiness of leaf sheath, medium outer glume pubescence and round grain shape.

- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**

- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**

- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**

- (10) If the variety is sold or otherwise disposed of, details thereof.

Purna(HI-1544) has been commercialized since 2008.

Certificate of Registration No. 113 of 2012

- (1) Registration Number and date of grant:- **113 of 2012 & 02/08/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Rasi Seeds Pvt. Ltd., 273, Kamarajanar Road, Attur,
Salem Dist-636102, Tamil Nadu**
- (3) Denomination of the variety:- **RCH 515 BG II**
- (4) Name of:
Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***hirsutum***
- Variety and common name: **New/Tetraploid Cotton**
- (5) Parentage and geographical location of the variety:-
RC 153 BG II X RC 44
35 A, Naryanapuram, Kallanathan, Attur-636102 Salem (Dt.)
- (6) Details of the distinguishing features or the characteristics:-
Green leaf colour, round boll shape (in longitudinal section) and medium long fibre length.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 114 of 2012

- (1) Registration Number and date of grant:- **114 of 2012 & 02/08/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-

**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**

- (3) Denomination of the variety:- **WH 711**

- (4) Name of:

Family: **Poaceae**
Genus: ***Triticum***
Species: ***aestivum***

Variety and common name: **Extant/Bread Wheat**

- (5) Parentage and geographical location of the variety:-

**HD 2285 ALD 'S' HFW-17
CCSHAU, Hisar**

- (6) Details of the distinguishing features or the characteristics:-

Medium hairs on flag leaf auricle, medium ear density, broad width and square shape of lower glume shoulder, medium colouration of grain with phenol and large seed size.

- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**

- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**

- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**

- (10) If the variety is sold or otherwise disposed of, details thereof.

WH 711 has been commercialized since 2002.

Certificate of Registration No. 115 of 2012

- (1) Registration Number and date of grant:- **115 of 2012 & 02/08/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-

**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**

- (3) Denomination of the variety:- **CISA 310**

- (4) Name of:

Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***avboreum***

Variety and common name: **New/Diploid Cotton**

- (5) Parentage and geographical location of the variety:-

CSA 9-8 X AC 3479
**Central Institute for Cotton Research, Regional Station, Sirsa-125005,
Haryana**

- (6) Details of the distinguishing features or the characteristics:-

Dense seed fuzz, round boll shape in longitudinal section, presence of leaf nectaries.

- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**

- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**

- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**

- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 116 of 2012

- (1) Registration Number and date of grant:- **116 of 2012 & 02/08/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**M/S Kaveri seeds company ltd. # 513 B, 5th floor,
Minerva Complex, S.D Road, Secunderabad-500003**
- (3) Denomination of the variety:-**KMH-Super 2020**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant (VCK)/Zea Maize**
- (5) Parentage and geographical location of the variety:-
(KML 2257 X KML 2163) X KML 104
**Research and Development Farm of the company at Gowraram, P.O.,
Wargal Mandal, Medak District, A.P.**
- (6) Details of the distinguishing features or the characteristics:-
Early time of anthesis, narrow tassel angle between main axis and lateral branches.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 117 of 2012

- (1) Registration Number and date of grant:- **117 of 2012 & 02/08/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-

**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**

- (3) Denomination of the variety:-**Py-6(IET-11898)**

- (4) Name of:

Family: **Poaceae**
Genus: ***Oryza***
Species: ***sativa***

Variety and common name: **Extant/Rice**

- (5) Parentage and geographical location of the variety:-

IR 19661 X CR 1009

Perunthalaivar Kamaraj Krishi Vigyan Kendra, Kurumbapet, Pondicherry-605009

- (6) Details of the distinguishing features or the characteristics:-

Medium pubescence of leaf surface, late time of heading, weak density of pubescence of lemma, medium stem length, horizontal attitude of flag leaf, semi-straight curvature of main axis of panicle, well excreted panicle, straw colour of sterile lemma, medium slender of decorticated grain shape and medium content of amylose in endosperm.

- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**

- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**

- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**

- (10) If the variety is sold or otherwise disposed of, details thereof.

Py-6(IET-11898) has been commercialized since 2001.

Certificate of Registration No. 118 of 2012

- (1) Registration Number and date of grant:- **118 of 2012 & 16/08/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
Kaveri Seed Company Ltd., # 513-B, 5th floor, Minerva Complex, S.D Road, Secunderabad-500003 (A.P)
- (3) Denomination of the variety:-**KMH-25K 55**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **sativa**
- Variety and common name: **Extant (VCK)/Maize**
- (5) Parentage and geographical location of the variety:-
**KML-2263 KML-2264 and
Research and Development Farm of the company at Gowraram, P.O.,
Wargal Mandal, Medak District, A.P.**
- (6) Details of the distinguishing features or the characteristics:-
Wide angle between main axis and lateral branches of tassel along with semi-dent type of grains, yellow colour of tops of grain with cap, Absence of anthocyanin colouration of glumes of cob.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 119 of 2012

- (1) Registration Number and date of grant:- **119 of 2012 & 03/09/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Dr. Punjabrao Deshmukh Krishi Vidyapeeth, P.O Krishingar
Akola-444001 Maharashtra, India**
- (3) Denomination of the variety:-**PKV DH-1(AKDH-7)**
- (4) Name of:
Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***arboreum***
- Variety and common name: **Extant /Diploid Cotton**
- (5) Parentage and geographical location of the variety:-
GAK 423 X HD 110-151
- Cotton Research Unit, Dr. Punjab Rao Deshmukh Krishi Vidyapeeth,
P.O., Krishi Nagar, Akola, MS**
- (6) Details of the distinguishing features or the characteristics:-
Digitate leaf shape, yellow petal colour, brown petal spot, ovate boll shape, pointed prominence of tip of boll, medium weight of seed for cotton/boll and medium seed index.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
PKV DH-1(AKDH-7) has been commercialized since 2004.

Certificate of Registration No. 120 of 2012

- (1) Registration Number and date of grant:- **120 of 2012 & 03/09/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Vibha Agrotech Ltd., 501, Subham Sirisampada,
Raj Bhawan Road, Somajiguda, Hyderabad-500082**
- (3) Denomination of the variety:-**VBCH-1018 BG(Cash BG)**
- (4) Name of:
Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***hirsutum***
- Variety and common name: **Extant /Tetraploid Cotton**
- (5) Parentage and geographical location of the variety:-
VBC-100088 A VBC-100154
Research and Development farm of Vibha Agrotech Ltd. (Main farm)
District Ranga Reddy, A.P.
- (6) Details of the distinguishing features or the characteristics:-
Dense seed fuzz, extra long fibre length along with large to very large boll weight of seed cotton.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof :**NA**

Certificate of Registration No. 121 of 2012

- (1) Registration Number and date of grant:- **121 of 2012 & 03/09/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Nusun Genetics Research Ltd., 501, Subham Sirisampada,
Rajbhavan Road, Somajiguda, Hyderabad-500082**
- (3) Denomination of the variety:-**VBCH-1016 BG(Bond BG)**
- (4) Name of:
Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***hirsutum***
- Variety and common name: **New/Tetraploid Cotton**
- (5) Parentage and geographical location of the variety:-
VBC 100085 A VBC 100155
Maharashtra, M.P., Gujarat, A.P., Karnataka and Tamil Nadu (on farm demonstration was conducted on 426 farmers field)
- (6) Details of the distinguishing features or the characteristics:-
Extra long fibre length along with white seed fuzz, fine fibre fineness.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 122 of 2012

- (1) Registration Number and date of grant:- **122 of 2012 & 04/09/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-

**Ankur Seeds (P) Ltd., 27 New Cotton Market Layout,
Opp. Bus Station, Nagpur-440018 (Maharashtra)**

- (3) Denomination of the variety:-**PFC-1**

- (4) Name of:

Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***hirsutum***

Variety and common name: **New/Tetraploid Cotton**

- (5) Parentage and geographical location of the variety:-

**Selection from segregation of cotton
Hybrid PKV Hy 5 (CAK-053 A X AKH 02 R)**

**Ankur Research Farm, Kinhi Post, Neri (Mankar), Tehsil, Hingana dist.
Nagpur, Maharashtra**

- (6) Details of the distinguishing features or the characteristics:-

Green leaf colour along with presence of flower anther filament colouration.

- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 123 of 2012

- (1) Registration Number and date of grant:- **123 of 2012 & 04/09/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Ankur Seeds (P) Ltd., 27 New Cotton Market Layout,
Opp. Bus Station, Nagpur-440018 (Maharashtra)**
- (3) Denomination of the variety:-**C-96**
- (4) Name of:
Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***hirsutum***
- Variety and common name: **New/Tetraploid Cotton**
- (5) Parentage and geographical location of the variety:-
**CA/MH-133
(AKH-84635 X Pan F-3 S2) and
Ankur Research Farm, Kinhi Post, Neri (Mankar), Tehsil, Hingana dist.
Nagpur, Maharashtra**
- (6) Details of the distinguishing features or the characteristics:-
**Green leaf colour, ovate boll shape in longitudinal section, presence of flower
male sterility.**
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 124 of 2012

- (1) Registration Number and date of grant:- **124 of 2012 & 04/09/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Ankur Seeds (P) Ltd., 27 New Cotton Market Layout,
Opp. Bus Station, Nagpur-440018 (Maharashtra)**
- (3) Denomination of the variety:- **RCH-530 BG II**
- (4) Name of:
Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***hirsutum***
- Variety and common name: **New/Tetraploid Cotton**
- (5) Parentage and geographical location of the variety:-
**CA/MH-133
(AKH-84635 X Pan F-3 S2)
35 A, Naryanapuram, Kallanathan, Attur-636102 Salem (Dt.)**
- (6) Details of the distinguishing features or the characteristics:-
Large weight of seed cotton/boll and extra long fibre length, yellow pollen colour and very bold seed size.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof:**NA**

Certificate of Registration No. 125 of 2012

- (1) Registration Number and date of grant:- **125 of 2012 & 04.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:- **Syngenta India Limited, Seeds Division, Royal Insurance Building,, 14, J, Tata Road, Church gate, Mumbai-400020(M.S)**
- (3) Denomination of the variety:- **SYN-CO-6661**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: *mays*

Variety and common name: **Extant (VCK)/Maize**
- (5) Parentage and geographical location of the variety:-
NP 5038 X NP 5088

Research Farm of Syngenta, Aurangabad & Bangalore, India
- (6) Details of the distinguishing features or the characteristics: -
Presence of anthocyanin colouration of silk, late time anthesis along with long plant length.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 126 of 2012

- (1) Registration Number and date of grant:- **126 of 2012 & 04.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:- **Nirmal Seeds Pvt. Ltd., P.O Box-63, Bhadgaon Road, Pachora-424201, Distt. Jalgaon, India**
- (3) Denomination of the variety:- **Navinya-6 (NACH-6)**
- (4) Name of:
Family: **Malvaceae**
Genus: **Gossypium**
Species: **arboreum**

Variety and common name: **Extant/Diploid Cotton**
- (5) Parentage and geographical location of the variety:-
NCGA-4 X NSA-13
Research farm, Nirmal Seeds Pvt. Limited, Pachora, Distt. Jalgaon,(MS)
- (6) Details of the distinguishing features or the characteristics:-
Very tall plant height, semi spreading plant habit, medium long fibre length, medium fibre strength, coarse fibre fineness, late time of flowering and medium stem hairiness.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
Navinya-6 (NACH-6) has been commercialized since 2006.

Certificate of Registration No. 127 of 2012

- (1) Registration Number and date of grant:- **127 of 2012 & 04.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **Himgiri (HS-375)**
- (4) Name of:
Family: **Poaceae**
Genus: ***Triticum***
Species: ***aestivum***
- Variety and common name: **Extant/Bread Wheat**
- (5) Parentage and geographical location of the variety:-
**BB X CJ 71
IARI, Regional Station, Tutikandi, Shimla**
- (6) Details of the distinguishing features or the characteristics:-
Late time of emergence, very strong ear waxiness, white ear colour, not prominent brush hair length and white awn colour.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
Himgiri (HS-375) has been commercialized since 2003.

Certificate of Registration No. 128 of 2012

- (1) Registration Number and date of grant:- **128 of 2012 & 04.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **Urja (HD-2864)**
- (4) Name of:
Family: **Poaceae**
Genus: ***Triticum***
Species: ***aestivum***
- Variety and common name: **Extant/Bread Wheat**
- (5) Parentage and geographical location of the variety:-
**DL 509-2 X DL 377-8
Division of Genetics, IARI, New Delhi**
- (6) Details of the distinguishing features or the characteristics:-
**Medium waxiness of leaf sheath, weak waxiness of culm neck, dark brown
own colour, dark brown ear colour, medium shoulder width of lower glume,
medium beak length of lower glume and moderately curved beak shape of
lower glume.**
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
Urja (HD-2864) has been commercialized since 2005.

Certificate of Registration No. 129 of 2012

- (1) Registration Number and date of grant:- **129 of 2012 & 04.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-

**Advanta India Ltd.,
203-205, II Floor, Bhuvana Tower, S.P Road,
Secunderabad-500030(A.P)**

- (3) Denomination of the variety:- **PAC 740**

- (4) Name of:

Family: **Poaceae**

Genus: **Zea**

Species: **mays**

Variety and common name: **Extant/Maize**

- (5) Parentage and geographical location of the variety:-

1. MD 28 2. MD 31 3. OB02

Agriculture Research Station, Advanta India Limited, Begur Post, Koppa Road, Bangalore

- (6) Details of the distinguishing features or the characteristics:-

Late tassel time of anthesis, presence of tassel anthocyanin colouration of glumes excluding base, curved tassel attitude of lateral branches, presence of ear anthocyanin colouration of silks, presence of anthocyanin colouration of sheath, flint ear type, orange ear colour of top of grain.

- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**

- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**

- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**

- (10) If the variety is sold or otherwise disposed of, details thereof.

PAC 740 has been commercialized since 2009.

Certificate of Registration No. 130 of 2012

- (1) Registration Number and date of grant:- **130 of 2012 & 19.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **Vipula**
- (4) Name of:
Family: **Papilionaceae**
Genus: ***Cajanus***
Species: ***cajan***
- Variety and common name: **Extant/Pigeon pea**
- (5) Parentage and geographical location of the variety:-
**ICPL 151 X Prabhat DT
Pulses Improvement Project, MPKV, Rahuri, District Ahmednagar (MS)**
- (6) Details of the distinguishing features or the characteristics:-
Tall plant height, spreading plant branching pattern, early time of flowering, absence of pattern of streaks on petal, dark brown seed colour and large seed size.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
Vipula has been commercialized since 2007.

Certificate of Registration No. 131 of 2012

- (1) Registration Number and date of grant:- **131 of 2012 & 19.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **VBN(Rg 3)**
- (4) Name of:
Family: **Papilionaceae**
Genus: *Cajanus*
Species: *cajan*
- Variety and common name: **Extant/Pigeon pea**
- (5) Parentage and geographical location of the variety:-
**Vamban 1 X Gulbarga
National Pulses Research Center (TNAU) Vamban-622303**
- (6) Details of the distinguishing features or the characteristics:-
Medium plant height, determinate growth habit, stem colour green, yellow colour of petal, green pod colour with brown streaks and medium seed size.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
VBN(Rg 3) has been commercialized since 2006.

Certificate of Registration No. 132 of 2012

- (1) Registration Number and date of grant:- **132 of 2012 & 19.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **GT-101**
- (4) Name of:
Family: **Papilionaceae**
Genus: *Cajanus*
Species: *cajan*
- Variety and common name: **Extant/Pigeon pea**
- (5) Parentage and geographical location of the variety:-
(ICP 7336 X BDN 1) X BDN2
Agriculture Research Station, Badnapur (MS)
- (6) Details of the distinguishing features or the characteristics: -
Medium plant height, spreading plant branching pattern, purple stem colour, cream seed colour and oval seed shape.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
GT-101 has been commercialized since 2004.

Certificate of Registration No. 133 of 2012

- (1) Registration Number and date of grant:- **133 of 2012 & 19.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **PR-113**
- (4) Name of:
Family: **Poaceae**
Genus: **Oryza**
Species: **sativa**
- Variety and common name:
- (5) Parentage and geographical location of the variety:-
**IR 8 X RP 21-51-173-1-8
Regional Rice Research Station (PAU), Kapurthala, Punjab**
- (6) Details of the distinguishing features or the characteristics: - **Strong leaf pubescence of blade surface, erect flag leaf attitude of blade, deflexed flag leaf attitude of blade, straight panicle curvature of main axis, yellowish spikelet colour of tip of lemma, spreading panicle attitude of branches, well exerted panicle, straw sterile lemma colour, medium decorticated grain width and long bold decorticated grain shape.**
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
PR-113 has been commercialized since 2001.

Certificate of Registration No. 134 of 2012

- (1) Registration Number and date of grant:- **134 of 2012 & 19.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **Appangala-1**
- (4) Name of:
Family: **Zingiberaceae**
Genus: ***Elletaria***
Species: ***cardamomum***
- Variety and common name: **Extant/Small cardamom**
- (5) Parentage and geographical location of the variety:-
Selection from clone 37 population
- Indian Institute of Spices Research, Cardamom Research Center,
Heravanand post, Madikeri Karnataka**
- (6) Details of the distinguishing features or the characteristics:-
**Green colour of leaf, height capsule number/panicle, yellow colour of
matured capsule and high seed weight.**
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
Appangala-1 has been commercialized since 1999

Certificate of Registration No. 135 of 2012

- (1) Registration Number and date of grant:- **135 of 2012 & 19.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
Syngenta India Ltd., Seeds Division, 1170/27, Revenue Colony, Shivajinagar, Pune-411005, Maharashtra
- (3) Denomination of the variety:- **SYN-CO-5258**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant/Maize**
- (5) Parentage and geographical location of the variety:-
NP 5211 X NP 5025
- Research Farm of Syngenta, Aurangabad & Bangalore, India**
- (6) Details of the distinguishing features or the characteristics:-
Medium time of anthesis and long plant length.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 136 of 2012

- (1) Registration Number and date of grant:- **136 of 2012 & 19.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:- **Devgen, NV, Technology park 30, B-9052, Zwijinarde, Belgium**
- (3) Denomination of the variety:- **CSH-21(MLSH-151)(SPH-1342)**
- (4) Name of:
Family: **Poaceae**
Genus: ***Sorghum***
Species: ***bicolor***

Variety and common name: **Extant/Sorghum**
- (5) Parentage and geographical location of the variety:-
MLSA 848 X MLR 34

Research and Development center, Bilda-431001, Phulambri Taluk, Aurangabad District (MS)
- (6) Details of the distinguishing features or the characteristics:-
Yellow green seedling anthocyanin colour of coleoptiles, medium plant time of panicle emergence, long leaf length of blade of 3rd leaf from top, very broad width of blade of 3rd leaf from top, semi-compact panicle density at maturity, long neck of panicle visible length above sheath.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
CSH-21(MLSH-151)(SPH-1342) has been commercialized since 2005.

Certificate of Registration No. 137 of 2012

- (1) Registration Number and date of grant:- **137 of 2012 & 19.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-

**Nusun Genetics Research Limited,
501, Subham Srisampada, Raj Bhawan Road,
Somajiguda, Hyderabad-500082**

- (3) Denomination of the variety:- **VBCH-1501 BG II**

- (4) Name of:

Family: **Malvaceae**

Genus: ***Gossypium***

Species: ***hirsutum***

Variety and common name: **New/Tetraploid cotton**

- (5) Parentage and geographical location of the variety:-

VBC 100139A X VBC 100154

Maharashtra, M.P., Gujarat, A.P., Karnataka and Tamil Nadu (on farm demonstration was conducted on 226 farmers field)

- (6) Details of the distinguishing features or the characteristics:-

Dense seed fuzz.

- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**

- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**

- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**

- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 138 of 2012

- (1) Registration Number and date of grant:- **138 of 2012 & 24.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Kaveri Seeds Company Ltd.,
#513-B, 5th Floor, Minerva Complex,
S.D Road, Secunderabad-500003 (A.P)**
- (3) Denomination of the variety:- **KMH-25K60**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name:
- (5) Parentage and geographical location of the variety:-
KML 2254 X KML 2168
- Research and Development Farm of the company at Gowraram, P.O.,
Wargal Mandal, Medak District, A.P.**
- (6) Details of the distinguishing features or the characteristics: -
Wide angle between main axis and lateral branches of tassel.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 139 of 2012

- (1) Registration Number and date of grant:- **139 of 2012 & 24.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Kaveri Seeds Company Ltd.,
#513-B, 5th Floor, Minerva Complex,
S.D Road, Secunderabad-500003 (A.P)**
- (3) Denomination of the variety:- **KMH-Super 244**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant/Maize**
- (5) Parentage and geographical location of the variety:-
KML 2277 X KML 2253
**Research and Development Farm of the Company at Gowraram, P.O.,
Wargal Mandal, Medak District, A.P.**
- (6) Details of the distinguishing features or the characteristics:-
**Semi flint type of grain in middle third of ear, presence of tassel anthocyanin
colouration of glumes excluding base and many numbers of rows of grains in
ear.**
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 140 of 2012

- (1) Registration Number and date of grant:- **140 of 2012 & 24.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Kaveri Seeds Company Ltd.,
#513-B, 5th Floor, Minerva Complex,
S.D Road, Secunderabad-500003 (A.P)**
- (3) Denomination of the variety:- **KMH-280**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant/Maize**
- (5) Parentage and geographical location of the variety:-
(KML 2021 X KML 2080) X KML 2015
**Research and Development Farm of the Company at Gowraram, P.O.,
Wargal Mandal, Medak District, A.P.**
- (6) Details of the distinguishing features or the characteristics:-
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 141 of 2012

- (1) Registration Number and date of grant:- **141 of 2012 & 24.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **Narendra Wheat-1067**
- (4) Name of:
Family: **Poaceae**
Genus: **Triticum**
Species: **aestivum**
- Variety and common name: **Extant/Bread Wheat**
- (5) Parentage and geographical location of the variety:-
**1. TR 3801630614 2. CHAT "S"
NDUA&T, Kumargunj, Faizabad (UP)**
- (6) Details of the distinguishing features or the characteristics: -
Green colour of foliage, medium ear length, oblong shape of grain, long length of brush hair and semi hard grain.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
Narendra Wheat-1067 has been commercialized since 2005.

Certificate of Registration No. 142 of 2012

- (1) Registration Number and date of grant:- **142 of 2012 & 24.09.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Indian Council of Agricultural Research (ICAR),
Krishi Bhawan, New Delhi-110114**
- (3) Denomination of the variety:- **Pusa RH-10**
- (4) Name of:
Family: **Poaceae**
Genus: ***Oryza***
Species: ***sativa***
- Variety and common name: **/Rice**
- (5) Parentage and geographical location of the variety:-
**Pusa 6A X PRR78 and
Division of Genetics, IARI, New Delhi and Rice Breeding and Genetics
Research Institute,(IARI) Aduthurai (TN)**
- (6) Details of the distinguishing features or the characteristics: -
Early time of heading, erect flag leaf attitude of blade, strong spikelet density of pubescence of lemma, short stem length, horizontal flag leaf attitude of blade, deflexed panicle curvature of main axis, white spikelet colour of tip of lemma, absence of panicle awns, semi erect panicle attitude of branches and medium endosperm content of amylose.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof.
Pusa RH-10 has been commercialized since 2001.

Certificate of Registration No. 143 of 2012

- (1) Registration Number and date of grant:- **143 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Kaveri Seeds Company Ltd.,
#513-B, 5th Floor, Minerva Complex,
S.D Road, Secunderabad-500003 (A.P)**
- (3) Denomination of the variety:- **KMH-218**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **Maize**
- Variety and common name: **Extant/Maize**
- (5) Parentage and geographical location of the variety:-
(KML 2257 X KML 2003) X KML 2163 and
**Research and Development Farm of the company at Gowraram, P.O.,
Wargal Mandal, Medak District, A.P.**
- (6) Details of the distinguishing features or the characteristics: -
Semi-dent type of grain and long plant length.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 144 of 2012

- (1) Registration Number and date of grant:- **144 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Kaveri Seeds Company Ltd.,
#513-B, 5th Floor, Minerva Complex,
S.D Road, Secunderabad-500003 (A.P)**
- (3) Denomination of the variety:- **KMH-2288(EKKA)**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant/Maize**
- (5) Parentage and geographical location of the variety:-
(KML 2013 X KML 2080) X (KML 2018 X KML 2019)
- Research and Development Farm of the company at Gowraram, P.O.,
Wargal Mandal, Medak District, A.P.**
- (6) Details of the distinguishing features or the characteristics:-
Long plant height, wide angle between blade and stem, absence of anthocyanin colouration of brace roots, absence of anthocyanin colouration of base of glume, wide angle between main axis and lateral branches, presence of anthocyanin colouration of silks, medium time anthesis.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 145 of 2012

- (1) Registration Number and date of grant:- **145 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Syngenta India Ltd.,
Seeds Division, 1170/27, Revenue Colony,
Shivajinagar, Pune-411005, Maharashtra**
- (3) Denomination of the variety:- **SYN-CO-6240**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant (VCK)/Maize**
- (5) Parentage and geographical location of the variety:-
NP 5024 X NP 5063
Research Farms of Syngenta across various locations in India.
- (6) Details of the distinguishing features or the characteristics: -
Presence of anthocyanin colouration of silks, late time of anthesis, conical ear shape, and semi-dent type of grain.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 146 of 2012

- (1) Registration Number and date of grant:- **146 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Syngenta India Ltd.,
Seeds Division, 1170/27, Revenue Colony,
Shivajinagar, Pune-411005, Maharashtra**
- (3) Denomination of the variety:- **SYN-CO-5440**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant (VCK)/Maize**
- (5) Parentage and geographical location of the variety:-
**NP 5210 X NP 5604
Research Farms of Syngenta, Aurangabad and Bangalore, India.**
- (6) Details of the distinguishing features or the characteristics:-
Medium time of anthesis.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 147 of 2012

- (1) Registration Number and date of grant:- **147 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Vibha Agrotech Ltd,
501, Subham Srisampada, Raj Bhawan Road,
Somajiguda, Hyderabad-500082**
- (3) Denomination of the variety:- **ELITE**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant (VCK)/Maize**
- (5) Parentage and geographical location of the variety:-
(VBMIB 0285 X VBMIB 0286) X (VBMIB 0287 X VBMIB 0288)
- Research and Development Farm (MBF) of Vibha Agrotech Limited,
Hyderabad India.**
- (6) Details of the distinguishing features or the characteristics: -
Presence of anthocyanin colouration of glumes excluding base and flint type of grain.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 148 of 2012

- (1) Registration Number and date of grant:- **148 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Vibha Agrotech Ltd,
501, Subham Srisampada, Raj Bhawan Road,
Somajiguda, Hyderabad-500082**
- (3) Denomination of the variety:- **VBCH-1505**
- (4) Name of:
Family: **Malvaceae**
Genus: **Gossypium**
Species: **hirsutum**
- Variety and common name: **New/Tetraploid cotton**
- (5) Parentage and geographical location of the variety:-
VBC 100088AA X VBC 100154
- Research and Development Farm (Main farm) of Vibha Agrotech Limited,
India.**
- (6) Details of the distinguishing features or the characteristics:-
Very large boll weight of seed cotton.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 149 of 2012

- (1) Registration Number and date of grant:- **149 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Nusun Genetics Research Ltd.,
501, Subham Sirisampada,
Rajbhavan Road, Somajiguda, Hyderabad-500082**
- (3) Denomination of the variety:- **VBCH-1503**
- (4) Name of:
Family: **Malvaceae**
Genus: ***Gossypium***
Species: ***hirsutum***
- Variety and common name: **New/Tetraploid cotton**
- (5) Parentage and geographical location of the variety:-
VBC 100085AA X VBC 100155
- Research and Development Farm of Nusun Genetics Research Limited
(MLC FARM)**
- (6) Details of the distinguishing features or the characteristics:-
Medium seed fuzz
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 150 of 2012

- (1) Registration Number and date of grant:- **150 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Maharashtra Hybrid Seed Company Limited
Resam Bhawan, 4th Floor, 78 Veer Nariman Road
Mumbai-400020 (Maharashtra)**
- (3) Denomination of the variety:- **MRC 7160**
- (4) Name of:
Family: **Malvaceae**
Genus: **Gossypium**
Species: **hirsutum**
- Variety and common name:
- (5) Parentage and geographical location of the variety:-
C5055 BG II X C 5091 BG II
- MAHYCO Research Farms at various locations of India.**
- (6) Details of the distinguishing features or the characteristics: -
Sparse stem hairiness along with large to very large boll weight of seed cotton.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 151 of 2012

- (1) Registration Number and date of grant:- **151 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Rasi Seeds Private Ltd.,
273, Kamarajanar Road, Attur,
Salem District, Tamilnadu, 636102**
- (3) Denomination of the variety:-**RCH 533 BG II**
- (4) Name of:
Family: **Malvaceae**
Genus: **Gossypium**
Species: **hirsutum**
- Variety and common name: **New/Tetraploid cotton**
- (5) Parentage and geographical location of the variety:-
**RC 139 BG II X RC 293
35 A, Naryanapuram, Kallanatham, Attur-636102 Salem (Dt.), Tamil Nadu,
636102**
- (6) Details of the distinguishing features or the characteristics:-
White seed fuzz colour.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 152 of 2012

- (1) Registration Number and date of grant:- **152 of 2012 & 03.10.2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
**Bayer Bioscience Private Ltd.,
8-1-39, Qutub Shahi Tomb Road, Tolichowki,
Hyderabad-500008(A.P)**
- (3) Denomination of the variety:- **BCN 401**
- (4) Name of:
Family: **Poaceae**
Genus: **Zea**
Species: **mays**
- Variety and common name: **Extant (VCK)/Maize**
- (5) Parentage and geographical location of the variety:-
(BCL 402 X BCL 401) X BCL 702
- Bayer Biosciences Research Farms at various locations across India.**
- (6) Details of the distinguishing features or the characteristics:-
Semi –flint type of grain along with presence of tassel anthocyanin colouration at base of glume.
- (7) In case of ‘essentially derived variety’, the details of the ‘initial variety’ from which the ‘essentially derived variety’ is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**

Certificate of Registration No. 153 of 2012

- (1) Registration Number and date of grant:- **153 of 2012 & 03/10/2012**
- (2) Name and address of applicant or breeder in whose name the certificate has been issued or registered:-
Shri Kuldeep Sing Sandhu
S/O Sh. Faujdar Singh Sandhu, Village and P.O Bamur,
Dist. Patiala, Panajab
- (3) Denomination of the variety:- **Wheat Ravi No. 1**
- (4) Name of:
Family: **Poaceae**
Genus: ***Triticum***
Species: ***aestivum***
- Variety and common name: **Farmer's/Bread Wheat**
- (5) Parentage and geographical location of the variety:-
Wheat Variety C273
- (6) Details of the distinguishing features or the characteristics:-
Folliage colour green, flag leaf waxiness of blade strong, ear shape in profile parallel side, outer glume pubescence very strong, lower glume shoulder width medium and grain colouration of phenol medium.
- (7) In case of 'essentially derived variety', the details of the 'initial variety' from which the 'essentially derived variety' is claimed to have been derived:- **NA**
- (8) Name and address of the contributor, nature and amount of the contribution or the community knowledge used in the development of the plant variety:- **NA**
- (9) Terms and conditions of the agreement, if any, entered into between the breeder and contributor:- **NA**
- (10) If the variety is sold or otherwise disposed of, details thereof: **NA**