



TWO/34/6

ORIGINAL: English

DATE: July 24, 2001

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

**TECHNICAL WORKING PARTY
FOR
ORNAMENTAL PLANTS AND FOREST TREES**

**Thirty-Fourth Session
Nagano, Japan, September 24 to 28, 2001**

WORKING PAPER ON THE REVISION OF TEST GUIDELINES FOR
NEW GUINEA IMPATIENS (*Impatiens* L.)

Document prepared by experts from Germany

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
I. Subject of these Guidelines	3
II. Material Required	3
III. Conduct of Tests	3
IV. Methods and Observations.....	4
V. Grouping of Varieties	4
VI. Characteristics and Symbols	4
VII. Table of Characteristics	5
VIII. Explanations on the Table of Characteristics	11
IX. Literature	12
X. Technical Questionnaire	13

I. Subject of these Guidelines

These Test Guidelines apply to all vegetatively propagated varieties of the New Guinea Impatiens Group of the family Balsaminaceae.

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the plant material required for testing the variety is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must make sure that all customs formalities are complied with. As a minimum, the following quantity of plant material is recommended:

20 rooted cuttings.

2. The plant material supplied should be visibly healthy, not lacking in vigour or affected by any important pests or diseases.

3. The plant material must not have undergone any treatment unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

III. Conduct of Test

1. A test should normally be conducted for one independent growing cycle. If distinctness and/or uniformity cannot be sufficiently established in one independent growing cycle, the test should be extended for a second independent growing cycle.

2. The tests should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.

3. The tests should be carried out under conditions ensuring normal growth (conditions for the Northern Hemisphere).

Planting time: March/April

Substrate: Porous substrate with good aeration, e.g. peat compost with added calcium carbonate to give pH 6,0-6,5.

Fertilisation: Liquid feeding according to substrate analysis.

Temperatures: At beginning 18-20°C for 6 weeks, then 14-17°C.

The size of the plots should be such that plants or parts of plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the growing period. As a minimum, each test should include a total of 20 plants. Separate plots for observation and measuring can only be used if they have been subject to similar environmental conditions.

4. Additional tests for special purposes may be established.

IV. Methods and Observations

1. All visual observations should be made on 20 plants or parts taken from each of 20 plants. All observations determined by measurement or counting should be made on 10 plants or parts taken from each of 10 plants.
2. For the assessment of uniformity a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 20 plants, the maximum number of off-types allowed would be 1.
3. All observations should be made at the time of full flowering.
4. Because daylight varies, colour determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

V. Grouping of Varieties

1. The collection of varieties to be grown should be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety. Their various states of expression should be fairly evenly distributed throughout the collection.
2. It is recommended that the competent authorities use the following characteristics for grouping varieties:
 - (a) Flower: number of colors (eye zone excluded) (characteristic 19)
 - (b) Flower: main color of upper side (characteristic 20)

VI. Characteristics and Symbols

1. To assess distinctness, uniformity and stability, the characteristics and their states as given in the Table of Characteristics should be used.
2. Notes (numbers), for the purposes of electronic data processing, are given opposite the states of expression for each characteristic.
3. Legend
 - (*) Characteristics that should be used on all varieties in every growing period over which examinations are made and always be included in the variety descriptions, except when the state of expression of a preceding characteristic or regional environmental conditions render this impossible.

(+) See Explanations on the Table of Characteristics in Chapter VIII.

VII. Table of Characteristics/Tableau des caractères/Merkmalestabelle/Tabla de caracteres

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. Plant: height of foliage (*)		Pflanze: Höhe der Laubzone			
short		niedrig		Kijos	3
medium		mittel		Colombo	5
tall		hoch		Firenze	7
2. Plant: width (*)		Pflanze: Breite			
narrow		schmal		Kimpgua	3
medium		mittel		Kitotoya	5
broad		breit		Kibarbu	7
3. Shoot: anthocyanin coloration (on upper third of a shoot)		Trieb: Anthocyanfärbung (im oberen Drittel des Triebes)			
absent or very weak		fehlend oder sehr gering		Vienna	1
weak		gering		Duesweetres	3
medium		mittel		Firenze	5
strong		stark		Kitotoya	7
very strong		sehr stark		Kimali	9
4. Petiole: length		Blattstiel: Länge			
short		kurz			3
medium		mittel			5
long		lang			7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5. Petiole: anthocyanin coloration on upper side		Blattstiel: Anthocyanfärbung auf der Oberseite			
absent or very weak		fehlend oder sehr gering		Kijos	1
weak		gering		Ricky Gini	3
medium		mittel		Firenze	5
strong		stark		Kinepor	7
very strong		sehr stark			9
6. Leaf blade: length (*)		Blattspreite: Länge			
short		kurz		Duesweetres	3
medium		mittel		Kitotoya	5
long		lang		Firenze	7
7. Leaf blade: width (*)		Blattspreite: Breite			
narrow		schmal		Kiluis	3
medium		mittel		Duesweetres	5
broad		breit		Firenze	7
8. Leaf blade: length/width ratio		Blattspreite: Verhältnis Länge/Breite			
small		klein		Kimpslav	3
medium		mittel		Kitotoya	5
large		groß		Kimaris	7
9. Leaf blade: marking (*) of upper side		Blattspreite: Zeichnung der Oberseite			
absent		fehlend		Kitotoya	1
present		vorhanden		Tempest	9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10. <u>Varieties with marking only:</u> (*) Leaf blade: color of marking of upper side		<u>Nur Sorten mit Zeichnung:</u> Blattspreite: Farbe der Zeichnung der Oberseite			
light yellow		hellgelb		Solared	1
yellow		gelb		Red Planet	2
yellow with red		gelb mit rot		Tempest	3
light green		hellgrün		Celsal	4
11. Leaf blade: anthocyanin coloration of upper side		<u>Blattspreite: Anthocyanfärbung der Oberseite</u>			
absent or very weak		fehlend oder sehr gering		Ballet	1
weak		gering		Kicarl	3
medium		mittel			5
strong		stark			7
very strong		sehr stark		Vulcain	9
12. Leaf blade: color of lower side between veins		<u>Blattspreite: Farbe der Unterseite zwischen den Adern</u>			
green		grün		Kitotoya	1
red		rot		Tempest	2
13. <u>Varieties with red lower side only:</u> (*) Leaf blade: intensity of red coloration on lower side between veins		<u>Nur Sorten mit roter Blattunterseite:</u> Blattspreite: Intensität der Rotfärbung der Unterseite zwischen den Adern			
weak		gering			3
medium		mittel			5
strong		stark			7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
14. Leaf blade: color of (*) veins on lower side		Blattspreite: Farbe der Adern auf der Unterseite			
green		grün		Kijos	1
red		rot		Kitotoya	2
15. Pedicel: length		Blütenstiel: Länge			
short		kurz			3
medium		mittel			5
long		lang			7
16. Pedicel: anthocyanin coloration		Blütenstiel: Anthocyanfärbung			
absent or very weak		fehlend oder sehr gering		Tempest	1
weak		gering		Ricky Gini	3
medium		mittel		Firenze	5
strong		stark		Kimpslav	7
very strong		sehr stark			9
17. Flower: type (*)		Blüte: Typ			
single		einfach		Kitotoya	1
double		gefüllt			2
18. Flower: width (* (+)		Blüte: Breite			
very narrow		sehr schmal		Kitol	1
narrow		schmal		Duesweetpur	3
medium		mittel		Kitotoya	5
broad		breit		Kibetio	7
very broad		sehr breit		Kimpslav	9

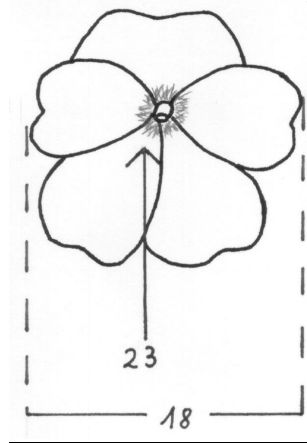
English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19. Flower: number of colors (eye zone excluded) (*)		Blüte: Anzahl Farben (Augenzone ausgenommen)			
one		eine		Kitotoya	1
two		zwei		Kibetio	2
three or more		drei oder mehr			3
20. Flower: main color of upper side (*)		Blüte: Hauptfarbe der Oberseite			
RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			
21. Varieties with bi- or multicolored flowers only: Flower: secondary color of upper side (*)		<u>Nur Sorten mit zwei- oder mehrfarbigen Blüten:</u> Blüte: Sekundärfarbe der Oberseite			
RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			
22. Varieties with bi- or multicolored flowers only: Flower: distribution of secondary color (* (+)		<u>Nur Sorten mit zwei- oder mehrfarbigen Blüten:</u> Blüte: Verteilung der Sekundärfarbe			
mainly on upper petal		hauptsächlich auf dem oberen Blütenblatt		Vulcain	1
on all petals around base		auf allen Blütenblättern um die Basis herum		Balcelisow	2
on all petals along mid-rip		auf allen Blütenblättern entlang der Mittelrippe		Kiluis	3
23. Flower: eye zone (* (+)		Blüte: Augenzone			
absent		fehlend		Kibetio	1
present		vorhanden		Kitotoya	9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
24. Flower: size of eye zone (*)		Blüte: Grösse der Augenzone			
small		klein		Firenze	3
medium		mittel		Tempest	5
large		gross		Kianton	7
25. Flower: main color of eye zone		Blüte: Hauptfarbe der Augenzone			
RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			
26. <u>Varieties with single flowers only:</u> Upper petal: width (+)		<u>Nur Sorten mit einfachen Blüten:</u> Oberes Blütenblatt: Breite			
narrow		schmal		Kipaqui	3
medium		mittel		Kijos	5
broad		breit		Kimali	7
27. <u>Varieties with single flowers only:</u> Lateral petal: width (+)		<u>Nur Sorten mit einfachen Blüten:</u> Seitliches Blütenblatt: Breite			
narrow		schmal		Kitotoya	3
medium		mittel		Firenze	5
broad		breit		Duesweetres	7
28. <u>Varieties with single flowers only:</u> Lower petal: length (+)		<u>Nur Sorten mit einfachen Blüten:</u> Unteres Blütenblatt: Länge			
short		kurz			3
medium		mittel			5
long		lang			7

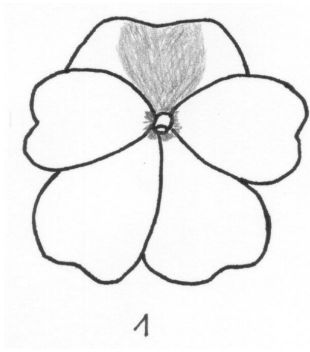
VIII. Explanations on the table of Characteristics

Ad. 18: Flower: width

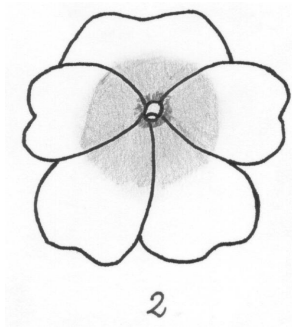
Ad. 23: Flower: eye zone



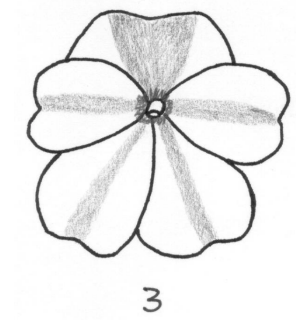
Ad. 22: Varieties with bi- or multicolored flowers only: Flower: distribution of secondary color



mainly on upper petal



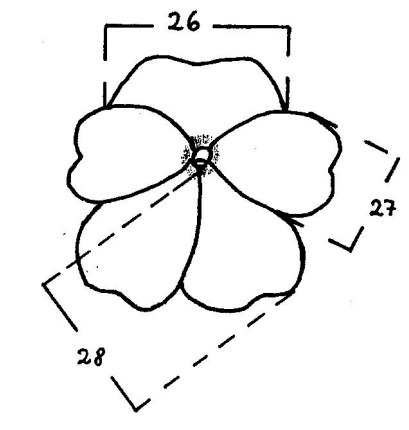
on all petals around base



on all petals along mid-rip

Ad. 26: Varieties with single flowers only: Upper petal: width

Ad. 27: Varieties with single flowers only: Lateral petal: width



Ad. 28: Varieties with single flowers only: Lower petal: length

IX. Literature

Grey-Wilson, C., 1980: *Impatiens of Africa*, A. A. Balkema, Rotterdam.

X. Technical Questionnaire

	<p>Reference Number (not to be filled in by the applicant)</p>
<p style="text-align: center;">TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>	
1. Species	<p style="text-align: center;"><i>New Guinea Impatiens</i> Group NEW GUINEA IMPATIENS</p>
2. Applicant (Name and address)	
3. Proposed denomination or breeder's reference	

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling (indicate parent varieties)

..... []

(b) Mutation (indicate parent variety)

..... []

(c) Discovery (indicate where and when)

..... []

(d) Other (specify)

..... []

4.2 Method of reproduction

(a) Cuttings

[]

(b) *In vitro* propagation

[]

(c) Other (specify)

..... []

4.3 Other information

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the state of expression which best corresponds).

	Characteristics	Example Varieties	Note
5.1 (1)	Plant: height of foliage		
	short	Kijos	3[]
	medium	Colombo	5[]
	tall	Firenze	7[]
5.2 (11)	Leaf blade: anthocyanin coloration of upper side		
	absent or very weak	Ballet	1[]
	weak	Kicarl	3[]
	medium		5[]
	strong		7[]
	very strong	Vulcain	9[]
5.3 (12)	Leaf blade: color of lower side between veins		
	green	Kitotoya	1[]
	red	Tempest	2[]
5.4 (14)	Leaf blade: color of veins on lower side		
	green	Kijos	1[]
	red	Kitotoya	2[]
5.5 (18)	Flower: width		
	very narrow	Kitol	1[]
	narrow	Duesweetpur	3[]
	medium	Kitotoya	5[]
	broad	Kibetio	7[]
	very broad	Kimpslav	9[]

	Characteristics	Example Varieties	Note
5.6 (19)	Flower: number of colors (eye zone excluded)		
	one	Kitotoya	1[]
	two	Kibetio	2[]
	three or more		3[]
5.7 (20)	Flower: main color of upper side		
	RHS Colour Chart (indicate reference number)	
5.8 (21)	<u>Varieties with bi- or multicolored flowers only:</u>		
	Flower: secondary color of upper side		
	RHS Colour Chart (indicate reference number)	

6. Similar varieties and differences between these varieties

Denomination of similar variety	Characteristic in which the similar variety is different ^{o)}	State of expression of similar variety	State of expression of candidate variety
---------------------------------	--	--	--

^{o)} In the case of identical states of expressions of both varieties, please indicate the size of the difference.

7. Additional information which may help to distinguish the variety

7.1 Resistance to pests and diseases

7.2 Special conditions for the examination of the variety

7.3 Other information

A representative color photo of the variety should be added to the Technical Questionnaire.

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [] No []

(b) Has such authorization been obtained?

Yes [] No []

If the answer to that question is yes, please attach a copy of such an authorization.