



TWC/22/4

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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**  
GENEVA

**TECHNICAL WORKING PARTY  
ON  
AUTOMATION AND COMPUTER PROGRAMS**

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**PROJECT TO CONSIDER THE PUBLICATION OF VARIETY DESCRIPTIONS**

*Document prepared by the Office of the Union*

1. The project to consider the publication of variety descriptions (see the Annex to document TC/38/10 Add.) identifies two main aspects to be developed. Firstly, it establishes the need for a model study to investigate and develop solutions to the technical issues concerning the possible development and publication of variety descriptions, at the international level, in an effective way. Secondly, it notes that there are important legal, administrative and financial issues which would need to be resolved, by the Administrative and Legal Committee (CAJ), before considering the possible introduction of an international system for the publication of variety descriptions. Regarding the model study, the proposal was that the Technical Committee (TC) and its Technical Working Parties (TWPs) should be invited to develop the technical aspects, whilst the *Ad hoc* Working Group on the Publication of Variety Descriptions (WG-PVD) was requested to develop a “test publication” of standardized variety descriptions produced in the model study.

2. At its thirty-ninth session held in Geneva from April 7 to 9, 2003, the TC agreed that the model study should be based on Apple, Barley, Chinese Cabbage, Lettuce, Petunia, Potato and Strawberry. The TC also noted the proposal from the WG-PVD for a study on Rose and agreed that consideration should be given to including only one type of rose in any study and that the matter should be discussed further by the Technical Working Party for Ornamental Plants and Forest Trees (TWO).

3. As a first step in the model study, the TC agreed that the coordinators, in conjunction with the Office of the Union (the Office), should obtain lists of varieties and identify those varieties which appeared in the lists of more than one country. The coordinator should then seek descriptions on a manageable number of varieties for comparison. The descriptions should be according to the characteristics in the latest version of the UPOV Test Guidelines and the location at which the descriptions were produced should be clearly identified. It was agreed that the delegate from Denmark, in conjunction with the Office, should develop some initial guidance for the coordinators to help in their planning and conduct of the study.

4. The purpose of this document is to report on:

(a) Progress in the model study as presented to the TC at its fortieth session, held in Geneva from March 29 to 31, 2004;

(b) Discussions in the TC concerning the model study;

(c) Consideration of the legal, administrative and financial issues by the CAJ; and

(d) The outcome of the meeting of the WG-PVD, held in Geneva on March 31, 2004.

*(a) Report on Progress in the Model Study as Presented to the TC at its Fortieth Session*

5. With regard to the possibility of conducting a model study on Rose, the TWO confirmed that there was an insufficient number of countries conducting DUS trials on rose to make this a useful study. Instead, it proposed that a study should be made on *Alstroemeria*, with Mr. Joost Barendrecht (Netherlands) as Coordinator, and the interested countries identified at the meeting as being Canada, Japan and Netherlands. Other countries would also be invited to participate.

6. The following initial guidance for the coordinators of the model studies has been developed by the Technical Working Party on Automation and Computer Programs (TWC), in conjunction with Mr. Gerhard Deneken (Denmark):

(a) where practically possible, the study should be conducted on all characteristics included in the UPOV Test Guidelines;

(b) contributors of variety descriptions should be requested to provide their “official” descriptions of the varieties concerned, i.e. the description resulting from the DUS examination of the variety. In making this recommendation, it noted that the description may have been re-calibrated in the meantime, but considered that if such changes could not be accommodated in the comparison of variety descriptions the aims of the project could not be met;

(c) in the case of authorities wishing to contribute variety descriptions for which they did not have “official” descriptions, e.g. for varieties which had been acquired for their reference collections, the description to be provided should be that produced at the end of the first complete cycle of testing in which the variety was included;

(d) contributors should be requested to specify the reference of the UPOV Test Guidelines on which the description had been developed; and

(e) contributors should be requested to provide the variety denomination, breeder's reference, breeder and applicant for each variety to verify, as far as possible, whether varieties were the same or different.

7. The TWC agreed that the Chairman of the TWC should, after consultation with the members of the TWC, develop guidance on how to present the variation in the states of expression between different descriptions of the same variety.

8. The Technical Working Party for Agricultural Crops (TWA) noted the suggestion of the expert from France that the GAIA software might be a useful tool for comparing descriptions in the study.

9. The following table summarizes the information on lists of varieties available for the studies and indicates the number of varieties on which the model studies will be based. The table indicates that the studies will involve well over 500 varieties and will include the participation of at least 30 members of the Union, the Community Plant Variety Office (CPVO) and the International Seed Federation (ISF). Further detailed information concerning the individual model studies follows after the table:

<u>Species / Crop</u>	<u>Proposing TWP / (Coordinator)</u>	<u>Contributors of Variety Lists (Interested Parties which did not provide a list)</u>	<u>Summary of Lists</u>	<u>Summary of varieties on which Model Study will be based</u>
<i>Alstroemeria</i>	TWO (NL)	(CA, JP, NL)	Request for lists sent December 2003	
Apple	TWF (GB)	BE, CA, CZ, DE, GB, HU, LV, NL, NZ, CPVO (AR, FR, ZA)	6 sources: 1 variety 4 sources: 8 varieties 3 sources: 19 varieties 2 sources: 55 varieties	1 variety 6 sources 2 varieties 4 sources 5 varieties 3 sources 2 varieties 2 sources Total: 10 varieties
Barley	TWA (DK)	AR, CA, CL, CZ, DE, DK, EE, ES, FI, FR, GB, HR, HU, NL, NZ, RO, RU, SE, ZA		Interested parties invited to contribute descriptions for all varieties.
Chinese Cabbage	TWV (JP)	DE, JP, KR, NL, PL (CN, CPVO, ISF)	3 sources: 2 varieties 2 sources: 23 varieties 1 source: 197 varieties	2 varieties 3 sources 23 varieties 2 sources Total: 25 varieties
Lettuce	TWV (NL)	CZ, DE, FR, HU, NL, PL, ES (CPVO, ISF)	6 sources: 1 variety 5 sources: 8 varieties 4 sources: 20 varieties 3 sources: 75 varieties 2 sources: 381 varieties 1 source: 1,362 varieties	1 variety 6 sources 8 varieties 5 sources 20 varieties 4 sources 75 varieties 3 sources 28 varieties 2 sources Total: 132 varieties
Petunia	TWO (DE)	DE, CA, NZ (AU, IL, JP, MX, KR, CPVO)		8 varieties

<u>Species / Crop</u>	<u>Proposing TWP / (Coordinator)</u>	<u>Contributors of Variety Lists (Interested Parties which did not provide a list)</u>	<u>Summary of Lists</u>	<u>Summary of varieties on which Model Study will be based</u>
Potato	TWA (NL/CPVO)	CA, CZ, DE, IL, NL, ZA (AT, CL, EE, GB, NZ, CPVO)	6 sources: 2 varieties 5 sources: 3 varieties 4 sources: 24 varieties 3 sources: 82 varieties 2 sources: 215 varieties	2 varieties 6 sources 3 varieties 5 sources 24 varieties 4 sources 82 varieties 3 sources 215 varieties 2 sources  Total: 326 varieties (plus additional varieties later)
Strawberry	TWF (IL)	AR, CA, HU, IL, NZ, CPVO (DE, ES, FR, KE, ZA)	>1 source: 170 varieties	10 varieties

### Apple

The Technical Working Party for Fruit Crops (TWF) agreed with the proposal of the Coordinator, Mrs. Alison Lean (United Kingdom), that this study should proceed with 10 varieties, using all characteristics included in the Test Guidelines for Apple. The varieties chosen were: Caudle; Hidala; Honeycrisp; Jonagored; Lena; Lochbuie Red Braeburn; Pinova; Scigold; Sciros; and Tenroy. The TWF welcomed the choice of varieties, noting that it represented a good split between seedling and mutation varieties. It was observed that the varieties might be known by different names in different countries, and it was agreed that the requests for descriptions should also indicate other names of the variety to ensure that as many descriptions of a variety as possible could be obtained. It was also agreed that all interested parties should be invited to contribute descriptions, including those which had not originally indicated that they had descriptions for the varieties concerned, on the basis that they might know the variety by another name. It was agreed that interested parties should be encouraged to submit descriptions of varieties other than official descriptions and that descriptions developed according to different versions of the Test Guidelines would be welcomed. It was noted that the contributors would have a column in the descriptions to indicate the status of the variety descriptions provided, e.g. whether they were official. The expert from South Africa requested to be added to the list of interested parties.

### Barley

The TWA agreed with the proposal of the Coordinator, Mr. Gerhard Deneken (Denmark), that the model study for barley should cover all barley and not just spring barley types. It was agreed that, in order to study variation within and between varieties as far as possible, the Office of the Union would issue a request for descriptions for all varieties for which contributors could make descriptions available. The request would allow countries to indicate where they had already contributed data to the earlier study reported in document TWA/29/19 and where they did not wish to provide further information.

### Chinese Cabbage

Mr. Mitsuo Yuasa (Japan), Coordinator for Chinese Cabbage, reported that he had received lists of varieties from Germany (14 varieties), Netherlands (88), Poland (20) and the Republic of Korea (60). Together with the varieties described in Japan, Mr. Yuasa noted that there were two varieties which appeared in the lists of three countries, 23 varieties which appeared in the lists of two countries and the remaining 197 varieties only appeared in the list of one country. The TWV agreed that the study should proceed on all 25 varieties appearing in the lists of two or more countries. The TWV agreed that the study should be based on all characteristics in the UPOV Test Guidelines.

### Lettuce

Mr. Kees van Ettehoven (Netherlands), Coordinator for Lettuce, reported that he had received lists from the Czech Republic (132 varieties), France (437), Germany (132), Hungary (68), Netherlands (PBR: 350; National List: 1,146), Poland (120) and Spain (93). The TWV agreed that the study should proceed on the basis of all 104 varieties which were included by three or more contributors and that a further 28 varieties be selected from the varieties included in the lists of two contributors to ensure involvement of all contributors. The TWV agreed that the study should be based on all characteristics in the UPOV Test Guidelines.

### Petunia

The TWO received an oral report from Ms. Andrea Menne (Germany), Coordinator for Petunia, on the first phase of the project, the results of which are presented as an Annex to this document. It noted that the first phase of the model study had been based on the characteristics included in the Technical Questionnaire of the Test Guidelines for Petunia. Furthermore, it noted that there was a high degree of harmonization in the variety descriptions for the selected characteristics despite the fact that the varieties were described before the Test Guidelines were introduced. With regard to the next phase of the study, the TWO agreed that descriptions should be sought for the same varieties and characteristics, including a request for color photographs, from further countries. The additional countries would include Israel, Japan and Mexico, and an invitation would be made for other countries to contribute. The request for descriptions would also seek information on the growing environment in which the varieties were described. Consideration would be given to the presentation of states of expression of the color characteristics in the form of color groups, in addition to RHS Colour references.

### Potato

Lists of varieties were received from: Canada (61 varieties); Czech Republic (179); Germany (190); Israel (22); Netherlands (298); and South Africa (50). The TWA agreed with the proposal of the Coordinators, Mr. Henk Bonthuis (Netherlands) and Mrs. Anne Weitz (CPVO), that the deadline for other interested parties to submit their lists of varieties should be extended until December 1, 2003. It was noted that the model study would include the 326 varieties mentioned in more than one list of those interested parties already having submitted their lists, plus additional varieties provided by other interested parties before the December 1, 2003, deadline. The TWA heard that the program plan was to approach the interested parties and ask them to provide for each requested variety: variety denomination, breeders reference, full description, Test Guidelines used for the description,

year of description, place of description, indication if it concerned an official variety description that had been used as a basis for granting a breeder's right or listing, or if it concerned a description for a variety forming a part of the reference collection.

The study would contain the analysis of the degree of variation (standard deviations) among the variety descriptions, differences among descriptions from similar varieties and among descriptions from different varieties by different grouping criteria. For instance: variation might be described and analyzed according to regional differences, by a group of characteristics or by a group of varieties, etc. Varieties and characteristics might also be classified based on the stability of the description. Similarity indices (considering the variation involved) might be developed to describe the morphological distance among varieties for (relevant) characteristics. This study would be done in the first half of 2004.

### Strawberry

The TWF agreed that the Coordinator, Mr. Baruch Bar-Tel (Israel), should circulate to the TWF, by the end of October 2003, a list of all varieties occurring on the list of more than one territory, together with his proposal for a shortlist of 10 varieties on which to conduct the study and a request for comments. On the basis of these comments, the list of 10 varieties would be finalized and the Office would issue a request for descriptions to all interested parties. The expert from South Africa requested to be added to the list of interested parties. The expert from France noted that the Coordinator would be able to obtain descriptions of strawberry varieties, developed by France, from their CD-ROM of vegetable variety descriptions

#### *(b) Discussions in the TC Concerning the Model Study*

10. Discussions at the fortieth session of the TC were based on document TC/40/7.
11. The TC welcomed the proposals concerning work on the model studies. It agreed a model study on *Alstroemeria* and that a model study on rose should not be pursued at present.
12. The TC recommended that the initial guidance for the Coordinators of the model studies, developed by the TWC, in conjunction with Mr. Gerhard Deneken (Denmark) (see paragraph 6 of this document), should be followed as far as possible. Furthermore, it agreed that the Chairman of the TWC should, after consultation with the members of the TWC, develop guidance on how to present the variation in the states of expression between different descriptions of the same variety and communicate this guidance to the coordinators of the model studies via the Office.

#### *(c) Consideration of the Legal, Administrative and Financial Issues by the CAJ*

13. At its forty-eighth session, held in Geneva on October 20 and 21, 2003, the CAJ discussed the results of a questionnaire on administrative, legal and financial issues on the basis of document CAJ/47/3. It agreed that the matters specified in paragraphs 7, 8 and 11 of document CAJ/47/3 should be considered by the WG-PVD.

(d) *Ad hoc Working Group on the Publication of Variety Descriptions (WG-PVD)*

14. A meeting of the WG-PVD was held in Geneva on March 31, 2004.

15. The WG-PVD welcomed the participation of the coordinators of model studies and the chairmen of the TWPs in the WG-PVD meetings, where this was possible in conjunction with their attendance at the sessions of the TC. It agreed that such invitations should be extended for future meetings.

Model Study

16. Discussions were based on document TC/40/7 and a report of the discussions in the fortieth session of the TC (see above).

17. Discussions focussed on the number of varieties for which descriptions were to be compared. The WG-PVD noted that, for example, in barley, lettuce and potato there were very large numbers of varieties and, therefore, large numbers of descriptions which would be compared. In two of the crops, namely Chinese Cabbage and *Alstroemeria*, there was a relatively small number of varieties, but this was because the number of varieties described in more than one territory was very small. However, it was noted that in two crops, namely Apple and Strawberry, there might be some encouragement to include a larger number of varieties. In order to increase the range of coverage of the model study overall, it was agreed that the Office of the Union should circulate, to all members of the Union, the lists of varieties on which the model studies would be based, and to encourage members to provide descriptions of those varieties where available.<sup>1</sup> It was considered important to emphasize that it was not necessary to provide descriptions of all the varieties if some were not available. It was also emphasized that descriptions would be useful even where these did not contain all the characteristics.

18. The WG-PVD discussed the need to conduct a thorough analysis of the data received and how to present that data. It was noted that, in general, this was a matter for the statisticians and that the TC had agreed that the Chairman of the TWC should, after consultation with the members of the TWC, develop guidance on how to present the variation in the states of expression between different descriptions of the same variety and communicate this guidance to the coordinators of the model studies via the Office. However, it was noted that the GAIA software developed in France might be used in the model study and recommended that this be considered further by the TWC.

19. The WG-PVD considered the development of the project in relation to the development of the web-based UPOV Plant Variety Database, because of the possibility of including variety description information in that database in the future - if that was decided to be appropriate. It was concluded that it was necessary to bear in mind the possibility of including descriptions, but also photographs and ways of linking the two types of information for a variety.

20. Discussions took place regarding the way in which description information included in the UPOV Plant Variety Database might be used. The WG-PVD recalled that the aim of the project was:

(a) to increase the availability of variety description information to interested parties (i.e. DUS examiners, breeders and maintainers of varieties of common knowledge) and thereby to maximize the effectiveness of the examination of distinctness; and

(b) to use appropriate elements of the variety description, in the process of examining distinctness, to eliminate varieties which do not require further comparison and to identify those varieties against which a further comparison is required,

and clarified that, with respect to the UPOV Plant Variety Database, the intention was not to develop an “on-line” DUS examination.

#### Administrative, legal and financial considerations

21. The WG-PVD based its discussion on document CAJ/47/3, paragraphs 7, 8 and 11.

22. It was agreed that, at this stage, there were no administrative, legal or financial barriers to the model studies and no urgent matters concerning administrative, legal and financial issues that needed to be addressed. For that reason, the meeting planned in October to look at the administrative and legal issues had been cancelled and the next meeting would take place in April 2005 (provisionally set for April 6), when there could be a review of progress on the model studies.

23. *The TWC is invited to:*

*(a) note that the TC agreed that the Chairman of the TWC should, after consultation with the members of the TWC, develop guidance on how to present the variation in the states of expression between different descriptions of the same variety and communicate this guidance to the coordinators of the model studies via the Office;*

*(b) consider how the GAIA software might be used in the model study.*

[Annex follows]

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<sup>1</sup> Circular E\_008/2004 was issued on May 13, 2004.



## ANNEX

## MODEL STUDY ON PETUNIA: DATA ON VARIETY DESCRIPTIONS

## Number of characteristics according to TG/PETUNI(proj.2)

Variety	Country	Year of testing	Char. 9 Leaf: variegation	Char. 18 Flower: type	Char. 19 Flower: diameter	Char. 22 Corolla lobe: number of colors of upper side	Char. 23 Corolla lobe: main color of upper side	Char. 27 Corolla lobe: conspicuousness of veins on upper side	Char: 30 Corolla tube: main color of inner side
Shihi Brilliant (Revolution Brilliant Pink)	DE	1994	1	1	6	1	RHS 74A (1986)	6	RHS 79C (1986)
	CA	2000	1	1	7	1	RHS 74A-B (1986)	7	RHS 79D (1986)
	NZ	VCK	1	1	7	1	RHS N74A (2001)	6	RHS N186A (2001)
Kesupite (Revolution White; Surfinia White)	DE	1995	1	1	4	1	RHS 155C (1986)	3	RHS 150C (1986)
	CA	2000	1	1	6	1	RHS 155D (1986)	3	RHS 155D (1986)
	NZ	1993/94	1	1	4	1	RHS 155C (1986)	2	RHS 155D (1986)
Sunsolos (Revolution Blue Vein; Surfinia Blue Vein)	DE	1994	1	1	2	1	RHS 69D (1986)	7	RHS 79D (1986)
	CA	2000	1	1	4	1	RHS 84B fading to 69D (1986)	7	RHS 88C-D (1986)
	NZ	1993/94	1	1	3	1	RHS 87D (1986)	7	RHS 83A (1986)

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Variety	Country	Year of testing	Char. 9 Leaf: variegation	Char. 18 Flower: type	Char. 19 Flower: diameter	Char. 22 Corolla lobe: number of colors of upper side	Char. 23 Corolla lobe: main color of upper side	Char. 27 Corolla lobe: conspicuousness of veins on upper side	Char: 30 Corolla tube: main color of inner side
Marrose (Surfinia Hot Pink)	DE	1994	1	1	6	1	RHS 66B (1986)	9	RHS 75A (1986)
	CA	2000	1	1	6	1	RHS 68A (1986)	9	RHS 78 C (1986)
Kerpril (Priscilla)	DE	1998	1	2	5	1	RHS 86A (1995)	8	RHS 87A (1995)
	CA	1999	1	2	5	1	RHS 87A fading to 85A (1986)	7	RHS 86A (1986)
	NZ	1998/99	1	2	5	1	RHS 80A (1995)	7	RHS 79A (1995)
Silk Road	DE	1998	1	2	2	1	RHS 155B (1995)	1	RHS 155A (1995)
	CA	2003							
	NZ	1998/99	1	2	4	1	RHS 155B (1995)	3	RHS 155B (1995)
Limelight	DE	1998	9	1	3	1	RHS 74A (1995)	3	RHS 79A (1995)
	CA	2000	9	1	3	1	RHS 74A (1986)	3	RHS 84A (1986)
Brevt (Evita)	DE	1998	1	1	3	2	RHS 83A (1995)	5	RHS 84A (1995)
	NZ	2000/01	1	1	5	2	RHS 83A (1995)	4	RHS 79A (1995)

MODEL STUDY ON PETUNIA: PHOTOGRAPHS OF VARIETIES



Shihi Brilliant (Revolution Brilliant Pink)



Kesupite (Revolution White)



Sunsolos (Revolution Blue Vein)



Marrose (Surfinia Hot Pink)



Kerpril (Priscilla)



Silk Road



Limelight



Brevt (Evita)