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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

TECHNICAL WORKING PARTY FOR VEGETABLES

Forty-Sixth Session

near the city of Venlo, Netherlands, June 11 to 15, 2012

REPORT

adopted by the Technical Working Party for Vegetables (TWV)

1. The Technical Working Party for Vegetables (TWV) held its forty-sixth session near the city of Venlo, Netherlands, from June 11 to 15, 2012. The list of participants is reproduced in Annex I to this report.

2. The TWV was welcomed by Mr. Marien Valstar, Representative of the Ministry of Economic Affairs, Agriculture and Innovation, and Mr. Nico Koomen, Director of Naktuinbouw and President of the Dutch Horticultural Council. Copies of the presentations made by Mr. Valstar and Mr. Koomen are provided in Annex II to this report.

3. The session was opened by Mr. François Boulineau (France), Chairman of the TWV, who welcomed the participants. He thanked the Netherlands for hosting the TWV session, and particularly appreciated the organization of the TWV session at the World Horticultural Exposition Floriade.

Adoption of the Agenda

4. The TWV adopted the agenda as reproduced in document TWV/46/1 Rev.

Short Reports on Developments in Plant Variety Protection

(a) Reports on developments in plant variety protection from members and observers

5. The TWV noted the information on development in plant variety protection from members and observers provided in document TWV/46/39 Prov.. The TWV noted that reports submitted to the Office of the Union after June 8, 2012, would be included in the final version of document TWV/46/39.

(b) Reports on developments within UPOV

6. The TWV received a presentation from the Office of the Union on the latest developments within UPOV, a copy of which is provided in document TWV/46/40.

Molecular Techniques

7. The TWV noted the information provided in document TWV/46/2.

TGP Documents

8. The TWV considered the TGP documents below on the basis of document TWV/46/3, in conjunction with document TWV/46/38 “Comments by the Technical Working Party for Agricultural Crops, at its

Forty-First Session, on documents to be considered by the Technical Working Party for Vegetables, at its Forty-Sixth Session".

Revision of TGP Documents:

TGP/7: Development of Test Guidelines

(i) Summary of revisions agreed for document TGP/7

9. The TWV considered document TWV/46/11.

10. The TWV noted that the TC had agreed that the guidance in document TGP/7, GN 7 should be extended to encourage Leading Experts to consider the quantity of plant material required for similar crops in order to seek consistency as far as that was appropriate. In that regard, it had agreed that a summary of the following information should be prepared by the Office of the Union for all adopted Test Guidelines and made available to Leading Experts on the TG Drafters' webpage in order that information on Test Guidelines for similar crops could be presented to the Subgroup of Interested Experts by the Leading Expert:

(a) Chapter 2.3 Minimum quantity of plant material to be supplied by the applicant

(b) Chapter 3.1 Number of growing cycles

(c) Chapter 3.4.1 Each test should be designed to result in a total of at least X plants

(d) Chapter 4.1.4 Number of plants / parts of plants to be examined for distinctness

(e) Chapter 4.2 Number of plants to be examined for uniformity

(f) Number of plants for special tests (e.g. disease resistance).

11. The TWV agreed that, as proposed in the Annex to document TWV/46/11, document TGP/7, GN 7, should be amended to read as follows:

1. "GN 7 (TG Template: Chapter 2.3) – Quantity of plant material required

"The drafter of the Test Guidelines should consider the following factors when determining the quantity of material required:

(i) Number of plants/ parts of plants to be examined
(ii) Number of growing cycles
(iii) Variability within the crop
(iv) Additional tests (e.g. resistance tests, bolting trials)
(v) Features of propagation (e.g. cross-pollination, self-pollination, vegetative propagation)
(vi) Crop type (e.g. root crop, leaf crop, fruit crop, cut flower, cereal, etc.)
(vii) Storage in variety collection
(viii) Exchange between testing authorities
(ix) Seed quality (germination) requirements
(x) Cultivation system (outdoor/glasshouse)
(xi) Sowing system
(xii) Predominant method of observation (e.g. MS, VG)

"In general, in the case of *plants* required only for a single growing trial (e.g. no plants required for special tests or variety collections), the number of plants requested in Chapter 2.3 often corresponds to the number of plants specified in Chapters 3.4 "Test Design" and 4.2 "Uniformity". In that respect, it is recalled the quantity of plant material specified in Chapter 2.3 of the Test Guidelines is the minimum quantity that an authority might request of the applicant. Therefore, each authority may decide to request a larger quantity of plant material, for example to allow for potential losses during establishment (see GN 7 (a)). In relation to the number of plants specified in Chapter 2.3, the number of plants/parts of plant to be examined (Chapter 4.1.4), should at least allow for the possibility of off-type plants within the tolerated number to be excluded from observations."

12. With regard to the proposed Additional Standard Wording (ASW) for Chapter 2.3 (minimum quantity of plant material), the TWV agreed that in the case of vegetables Alternative 2 would be appropriate:

"Alternative 2:

"2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

[…]

, which should be supplied as a single submission."

(ii) Guidance on the number of plants to be examined (for distinctness)

13. The TWV considered document TWV/46/12 and the presentation made by the expert from Germany.

14. The TWV agreed to propose to amend Annex II, paragraph 3 from "qualitative" to "quantitative".

15. The TWV agreed with the proposed guidance but highlighted that, in the case of measurements and statistical approaches, the number of plants should be the same for candidate and reference varieties.

(iii) Guidance for method of observation

16. The TWV considered document TWV/46/13. It agreed with the proposed text for guidance on method of observation as set out in paragraphs 2 to 6 of the Annex to document TWV/46/13 and proposed to modify the text of paragraph 7 to read as follows:

"(b) Number

7. If a characteristic is observed by counting (for example 'Number of lobes', observed by counting), the assessment is a measurement (M). If a characteristic is observed by estimation (for example 'Number of lobes', observed by estimation), the assessment is a visual observation (V)."

(iv) Example Varieties

17. The TWV considered documents TWV/46/14 and TWV/46/14 Add.. The TWV supported the comments made by the expert from New Zealand as follows and presented by an expert from France:

- Leading Expert collects the example varieties proposed by the interested UPOV members with a description for each of these varieties.
- Leading Expert compiles the proposals taking into account the number of countries in common. Request for additional information on descriptions if necessary.
- Based on the descriptions received, Leading Expert analyses the robustness of the levels of expression and establishes a proposal based on the most common varieties as a first priority for QN characteristics. This proposal included in the 2nd draft will be studied by the experts before the following session and discussed during the session.
- Finally the subgroup decides for which characteristic the example varieties will be proposed.

18. The TWV proposed to provide the minimum number of example varieties required for QN characteristics according to document TGP/7/3, Annex 3: GN 28: 2.3 "Illustration of the range of expression within the variety collection" and that it would be useful to organize ring tests for calibration where appropriate.

(v) Providing Photographs with the Technical Questionnaire

19. The TWV considered document TWV/46/15 and agreed with the conclusion of the TWA as follows (see document TWV/46/38, paragraph 10:

"[the TWA] agreed that the proposed new text for ASW 16 should be reviewed taking into consideration that different authorities might have different procedures concerning the provision of photographs with the Technical Questionnaire and, in particular, that the provision of photographs might be optional for some authorities but mandatory for some others. It also requested clarification on the means by which the guidance in the document would be made available to the applicants. The TWA took note of the concern expressed by the representative of European Seed Association (ESA) for submission of photographs for vegetable species (see document TWA/41/34 "Report", paragraph 20)."

20. The TWV noted the information provided by the delegation of Japan, concerning a manual developed for the East Asia Plant Variety Protection Forum, on how to take photographs for plant variety protection applications and DUS testing.

TGP/8: Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability

TGP/8 PART I: DUS TRIAL DESIGN AND DATA ANALYSIS
New Section 2 - Data to be recorded

21. The TWV considered document TWV/46/16 and received a presentation by an expert from Germany. It agreed that the document should be submitted to the TC for approval at its next session.

22. The TWV agreed with the comments of the TWA that an explanation of the importance of both statistical approaches and expertise in DUS testing should be reflected in other TGP documents, such as TGP/9 and TGP/10. It also highlighted the importance of DUS expert knowledge and experience.

TGP/8 PART II: TECHNIQUES USED IN DUS EXAMINATION
New Section - Guidance of data analysis for blind randomized trials

23. The TWV considered document TWV/46/17 and agreed with the comments of the TWA expressing the importance of these blind randomized trials for the breeders and the contribution they made to the system and recommending that the work on that guidance should be continued on the basis of that document.

TGP/8 PART II: TECHNIQUES USED IN DUS EXAMINATION
New Section - Guidance for Development of Variety Description

24. The TWV considered document TWV/46/18.

25. The TWV thanked the drafter for the work on the document but agreed that this guidance is already provided in the TGP documents and proposed not to further develop the guidance on variety descriptions. The TWV concluded that the process of preparing a variety description is largely based on the experience of the DUS expert.

TGP/8 PART II: TECHNIQUES USED IN DUS EXAMINATION
Section 3, Subsection 3.6 - Adapting COYD to Special Circumstances

26. The TWV considered document TWV/46/20.

27. The TWV supported the inclusion of the proposed text as Subsection 3.6 in Section 3 of TGP/8 Part II.

28. The TWV agreed that the wording of paragraph 3.6.4.2 should read “groups” instead of “grouping” in the last sentence.

TGP/8: PART I: DUS TRIAL DESIGN AND DATA ANALYSIS
New Section - Reduction of size of the trials

29. The TWV considered document TWV/46/21.

30. The TWV considered that the proposed method was useful and recommended its inclusion in document TGP/8.

TGP/8: PART II: TECHNIQUES USED IN DUS EXAMINATION
Section 4 - 2X1% Method - Minimum Number of Degrees of Freedom for the 2x1% Method

31. The TWV considered document TWV/46/22.

32. The TWV agreed with the proposal made by the TWA, to invite the TWC to clarify whether COYD was the preferred method, or to explain the circumstances in which the 2x1% method would be preferred.

TGP/8: PART II: TECHNIQUES USED IN DUS EXAMINATION
Section 3 - The Combined-Over-Years Uniformity Criterion (COYD)

33. The TWV considered document TWV/46/23.

34. The TWV noted the proposal for the revision of the minimum number of degrees of freedom for distinctness. The TWV agreed with the proposal of the TWA to invite the TWC to clarify the changes and to

suggest how to revise the schematic in document TGP/8 Part I Section III: Choice of statistical methods for examining for distinctness Chapter 3.4 “Requirements for statistical methods for distinctness assessment”.

TGP/8: PART I: DUS TRIAL DESIGN AND DATA ANALYSIS
New Section - Minimizing the Variation due to Different Observers

35. The TWV considered document TWV/46/24 and highlighted the importance of the calibration of the observer.

TGP/8: PART II: TECHNIQUES USED IN DUS EXAMINATION
New Section 10 - Minimum number of Comparable Varieties for the Relative Variance Method

36. The TWV considered document TWV/46/26.

37. The TWV agreed with the proposal of the TWA that Chapter 10.2 “Threshold limits for Relative Variance Method” of the Annex to document TWV/46/26 should be considered by the TWC for incorporation into document TGP/8/1 Section 10.

TGP/8: PART II: TECHNIQUES USED IN DUS EXAMINATION
New Section 10 - Examining DUS in Bulk Samples

38. The TWV considered document TWV/46/28.

39. The TWV agreed with the proposal of the TWA that, in relation to bulk samples, there were no specific requirements for assessment of distinctness.

40. The TWV proposed that the loss in comparison between individual tests and different levels of bulking should be evaluated.

TGP/8: PART II: TECHNIQUES USED IN DUS EXAMINATION
New section: Statistical Methods for Visually Observed Characteristics

41. The TWV considered document TWV/46/29.

42. The TWV considered that the method presented in the Annex to document TWV/46/29 was a useful alternative to the Chi-square test for independence in the contingency table and agreed to suggest to provide more examples and data to further develop the document.

TGP/8: PART II: TECHNIQUES USED IN DUS EXAMINATION
New Section: Methods for Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions

43. The TWV considered document TWV/46/30 and received a presentation made by the Office containing a summary of different approaches for transforming means into notes for variety descriptions.

44. The TWV was informed that the summary would be presented to the TWC at its thirtieth session and that it would be further developed.

TGP/14: Glossary of Terms Used in UPOV Documents

(i) Revisions of existing Sections of document TGP/14: Section 2: Botanical Terms, Subsection 2: Shapes and Structures

45. The TWV considered document TWV/46/27.

46. The TWV proposed to amend the definitions of peduncle, pedicel, main stem, as set out in Annex II to document TWV/46/27, as follows:

Terms	Definition / comment
Peduncle	A stem supporting a solitary flower or fruit, or an inflorescence, or supporting an infructescence ~~after fecundation~~
Pedicel	A stem which attaches single flowers or fruits to the ~~main stem~~ peduncle of the inflorescence or infructescence.
Petiole	A stalk attaching the leaf blade to the stem
Petiolule	A stalk of any of the leaflets making up a compound leaf.

47. The TWV agreed that the duplication of characteristics should be avoided, but highlighted that ratio and shape are not always duplicated characteristics as indicated in paragraph 2.1.1 of document TGP/14/1, Section 2: Botanical Terms: Subsection 2: Shapes and Structures: I. SHAPE: 2. "Developing Shape-Related Characteristics" and could be useful in DUS examination.

48. The TWV highlighted that the use of length, width and ratio could be useful in certain cases, if appropriate.

49. With regards to revision of "components of shape: states of expression for ratios", the TWV recommended that it would be more appropriate to use the states "very low to very high" in place of "very high to very low" when considering ratio: length/width. If the characteristic ratio: length/width was presented as shape, then the states would be "very compressed to very elongated" in place of "very elongated to very compressed".

50. The TWV agreed with the proposal of the TWA that the guidance on use of composite characteristics for determining distinctness and uniformity contained in Annex V to document TWA/41/27 was useful and recommended its inclusion in document TGP/14.

(ii) New Section for Color Characteristics

51. The TWV considered document TWV/46/25 and noted modifications made in the new draft on the basis of the comments by the TWPs in 2011.

Webcasting of UPOV Sessions

52. The TWV considered document TWV/46/36, but highlighted the limit of electronic communication tools considering the importance of the topics and the experts involved.

Uniformity assessment

(a) Method for calculation of COYU

53. The TWV noted the information provided in document TWV/46/10.

(b) Assessing uniformity by off-types on the basis of more than one sample or sub-samples (document to be prepared by the Office of the Union)

54. The TWV considered document TWV/46/9.

55. The TWV noted the different approaches and the similarity between the approaches used in different UPOV members. It agreed to invite the Technical Working Party on Automation and Computer Programs (TWC) to advise whether to use individual or combined results. The experts from Germany, Italy, France and the Netherlands offered to provide examples and data to the TWC, if needed.

56. The TWV agreed that the definition of sample size should be more precise.

Levels of Uniformity According to the State of Expression of Obligatory Disease Resistance Characteristics and Varieties not bred for having such Disease Resistance

57. The TWV noted the information provided in document TWV/46/34, presented by an expert from the European Union.

58. The TWV noted the proposal of the European Union to collect data on the subject from members of the European Union to be presented at the forty-seventh session of the TWV, in order to evaluate whether this approach could be useful to resolve the current situation.

Experience with new Types and Species

59. The TWV considered document TWV/46/37 and advised that it would be useful to contact relevant members of the Union to evaluate the number of applications received and their knowledge on these species.

Variety denominations

60. The TWV noted the developments reported in document TWV/46/4.

Discussion on Draft Test Guidelines

*Bottle Gourd, Calabash (*Lagenaria siceraria *(Molina) Standl.)*

61. The subgroup discussed document TG/LAGEN(proj.1), presented by Mrs. Chrystelle Jouy (France), and agreed the following:

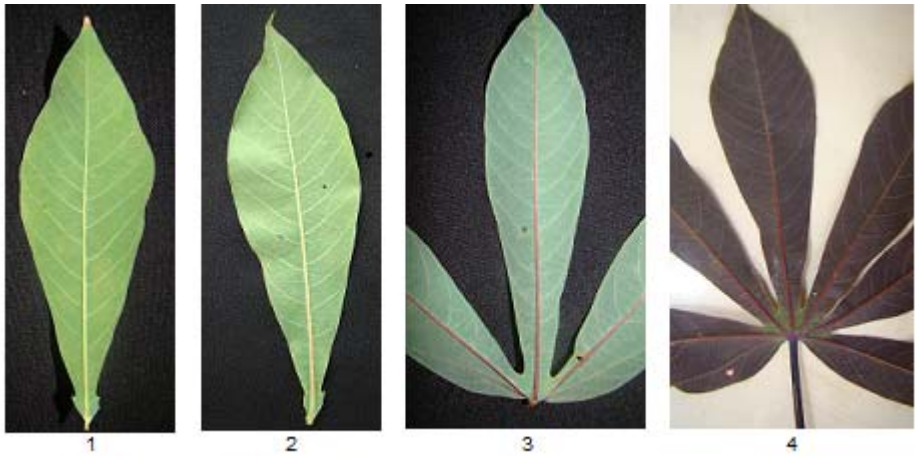
Cover page	to put botanical name in italics
4.2 (b)	to read “(b) Hybrid varieties (and parental lines) 4.2.3 The assessment of uniformity for hybrid varieties depends on the type of hybrid and should be according to the recommendations for hybrid varieties and parental lines in the General Introduction.”
4.2 (c)	to add paragraph numbering 4.2.4
Table of chars.	to add example varieties
Char. 1	- to delete states 1 and 9 - to have condensed scale with notes 1 to 3 - to add (+) - to be indicated as VG/MS
Char. 2	- to delete states 1 and 9 - to add (+) - to add to TQ 5
Char. 3	to be deleted
Char. 4	to delete states 1 and 9
Char. 5	to delete states 1 and 9
Char. 6	to check whether this is a relevant characteristic for Lagenaria
Char. 7	- to add (+) - to check whether “lobing” refers to leaf blade or margin of leaf blade - to correct spelling of “lobing”
Char. 8	to be deleted if no example varieties available
Char. 9	to delete states 1 and 9
Char. 10	to delete states 1 and 9
Char. 11	- to be indicated as QL and VG - to add (+)
Char. 12	- to check whether states correspond to TGP/14 - to add (+)

Char. 13	to be indicated as QN
Char. 14	- to read “Fruit: diameter”
Char. 16	to check whether states correspond to TGP/14
Char. 17	to be indicated as QN
Char. 18	- to read “Only necked varieties: Fruit: diameter of neck” - to delete states 1 and 9
Char. 19	to read “Fruit: ground color”
Char. 20	to read “Fruit: intensity of ground color”
Chars. 19, 20	to check whether yellow exists, otherwise to delete char. 19 and char. 20 to read “Intensity of green color”
Char. 21	to check whether it should read “dots” or “speckles”
Char. 22	- to check whether it should read “dots” or “speckles” - to delete states 1 and 9
Char. 23	to be indicated as PQ
Char. 24	- to read “Only varieties with Fruit: Texture of skin: warted: Number of warts” - to delete states 1 and 9
8.1	key to read: “(a) at appearing of the first leaf (b) before the development of the fruit (c) at full development of fruits.”
Ad. 1	to add photos and explanation on how to measure
Ad. 2	to add explanation on how to measure
Ad. 7	to add illustrations
Ad. 11	to explain how to observe
Ad. 13	to delete photos and table and to add explanation that developed length is to be observed
Ad. 14	to delete photos and table and add explanation that the widest part is to be measured
Ad. 17	to provide different photograph for state 5 (no difference to state 7)
Ad. 18	to indicated widest part of neck with lines
TQ 7.3	- to add diseases for which protocol exists to Table of characteristics - to check whether the whole crop is resistant or not

*Cassava (*Manihot esculenta *Crantz.)*

62. The subgroup discussed documents TG/CASSAV(proj.3)(rev.) and TWV/46/33, presented by Mr. Ricardo Zanatta (Brazil), in the absence the Leading Experts from Brazil and Kenya and agreed the following:

Cover page	- to add French common name “Manioc” - to add German common name “Maniok” - to add Spanish common names “Mandioca” and “Yuca”
2.3	to read “The minimum quantity of plant material, to be supplied by the applicant, should be: 30 cuttings, each one with a minimum length of 20 cm with 5 to 8 buds.”
5.3	- to delete characteristics 4, 10, 15, 22
General remark on Table of Chars.	- to add an annex with regional example varieties from Brazil and Tanzania
Char. 3	- state 2 “obovate” to become state 3 - state 3 “oblong” to become state 2 and to read “elliptic”
Char. 5	to add example varieties
Char. 6	to add example varieties
Char. 7	to be indicated as VG/MS
Char. 8	to be indicated as VG/MS

Char. 9	to add example varieties for states (3) and (4) and improve existing photos and add photo for state (4) as follows:  1 green 2 reddish green 3 red 4 purple
Char. 10	to check whether state 4 can be deleted
Char. 11	- to add to Ad. 11 that to be observed on the upper third of the plant - to be indicated as VG/MS
Char. 12	to add to Ad. 12 that to be observed on the upper third of the plant
Char. 13	to be indicated as VG/MS
Char. 14	to be indicated as PQ
Char. 17	- state (4) to read “brownish yellow” instead of “golden” - to check whether example variety for state 4 is available
Char. 19	to be indicated as QL
Char. 20	to add example variety for state 7
Char. 21	- to read “Stem: distance between leaf scars” - to add example varieties
Char. 22	- to read “Stem: color of end branches (at top of plant) - to check whether example varieties are available for states 4 and 5
Char. 23	to check whether the term “peduncle” is correct
Char. 24	to read “Root: external color of epidermis”
Char. 25	to add example varieties
Char. 26	to add example varieties
Char. 27	- to be moved after char. 24 - to have notes 1 and 2
Char. 29	to add example varieties
Ad. 2	to improve resolution of pictures
Ad. 3	to rotate pictures 180 degrees
Ad. 7 and 8	to add lines to indicate which part to be measured
Ad. 10	to add explanation on where to be observed
Ad. 14	to be added as follows:  1 compact 2 open 3 umbrella 4 cylindrical

Ad. 15	to be added as follows:  1 unbranched 2 branched or to consider whether drawings would be more appropriate
Ad. 16	to be added as follows:  1 light green 2 dark green 3 cream 4 purplish
Ad. 21	- to add an explanation that the characteristic should be observed at the middle third of the plant - to delete indication of length - to add illustration as follows:  - to add explanation that two scars in the same alignment are to be observed
Ad. 29	to add reference for the Williams and Edward (1980) method to chapter 9
TQ 5	to delete 5.4, 5.6, 5.10
TQ 6	to add example

*Chives (*Allium schoenoprasum *L.) (Revision)*

63. The subgroup discussed document TG/198/2(proj.1), presented by Mr. Raoul Haegens (Netherlands), and agreed the following:

4.1.4	to delete last sentence
new. char.	- to add old characteristic 4 from previous adopted version “Leaf: curvature” and to add explanation - to example varieties Polyvert for state 2 and Polystar for state 6
Char. 3	to have notes 1 to 3
Char. 4	to be deleted
Char. 5	- to add (*) - to check whether example variety “Twiggy” can be added to this characteristic
Char. 6	to be deleted
Char. 7	- to provide more example varieties - to add (+)
Char. 9	to add example varieties for state 1 and explanation or delete characteristic
Char. 11	to add example variety for state 1
Char. 12	to have notes 1 to 3
Char. 13	- to be indicated as QN and MG - to add (+) and to move information in brackets to Ad. 13
Char. 14	to be deleted
Char. 15	to change following Test Guidelines for onion
new Char.	- to add characteristic 19 from previous adopted version - to add (+) and to move information in brackets to Ad. in chapter 8.2 - to check which ex. var. can be used from deleted char. 14 - to add (*)
new Char.	to read “Flower: color” with states pale pink, medium pink, violet (notes and other information to be defined)
Ad. 7	to add explanation on which leaves length should be measured (the longest leaves)
Ad. 10	to explain when/how size should be measured (not cutting)

*Coriander (*Coriandrum sativum *L.)*

64. The subgroup discussed document TG/CORIA(proj.3), presented by Mr. Ricardo Zanatta (Brazil), and agreed the following:

Cover page	French name to be corrected to read “Coriandre
5.3	to add 1, 4, 7 and 17 as grouping characteristics
Char. 1	- to add (*) - to have the following states and example varieties: absent or weak (1) with “Americano” medium (2) with “Palmeira” strong (3) with “HTV-9299, Tabocas”
Char. 3	- to be indicated as MG/VG - to have notes 1 to 3 - example variety for state 1 to read “Tabocas”
Char. 4	to have example varieties “Palmeira”for state 3, “Asteca” for state 5, “Santo” for state 7
Char. 5	to have notes 1 to 5
Char. 6	- to read “Foliage: intensity of green color”and to have states “light”, “medium”, “dark” with notes 1 to 3 - to provide example variety for state 1
Char. 7	- to add (*) - to be indicated as QN
Char. 8	- to have notes 1 to 3 - to be indicated as VG

Char. 9	to be deleted
Char. 10	to be deleted
Char. 11	- to read “Basal leaf: length” - to move after characteristic 6 (together with other basal leaf characteristics) - to delete states 1 to 9 - to have notes 1 to 3 and to check example varieties
Char. 12	to be deleted
Char. 13	to be deleted
Char. 14	to have notes 1 to 3
Char. 15	to check example varieties of states 3 and 7
Char. 16	to be indicated as QN
Char. 17	- to add (*) - to move explanation in brackets to Ad. 17 - to add example varieties for state 1
8.1	- (c) to be deleted (no more flower characteristics) - (d) to become (c) and to adapt the table of chars. accordingly
Ad. 3	to indicate soil level in illustration
Ad. 4	to read “Basal leaves are the leaves around the stem forming a rosette, excluding the cotyledon leaves.
Ad. 7	to be provided
Ad. 8, 11	to adapt drawing according to change in table of chars.
Ad. 16	to adjust size of pictures (same length)
TQ 4.2	- 4.2.1.: to delete (a) Self-pollination and (c) (Hybrids) - to delete section on hybrids
TQ 5	to add grouping characteristics (characteristics 1, 4, 7, 17)
TQ 6	to add example

*Endive (*Cichorium endivia L.) *(Revision)*

65. The subgroup discussed document TG/118/5(proj.2), presented by Mrs. Marian van Leeuwen (Netherlands), and agreed the following:

UPOV code	necessary to create a new UPOV code for Cichorium endivia L. subsp. *endivia* CICHO_END_END
Botanical name	- to read “*Cichorium endivia* L. subsp. *endivia*” - to add synonyms to alternative names •(=) *Cichorium endivia* var. *crispum* Lam./ Chicorée frisée (French) •(=) *Cichorium endivia* var. *latifolium* Lam./ Chicorée scarole (French)
1.	to read “*Cichorium endivia* L. subsp. *endivia*” only
5.3	to delete (a), (b), (c)
Char.1, 2, 3	- to delete and to move to 5.3 (Plant: growth type) - to add For further information, see Section 8.1 “Key to Chicory Types” - to put under growth sub types.
Char. 4	to add (*)
Char. 5	to provide illustrations
Char. 6	- to read Plant: shape of upper part in longitudinal section - to be indicated as PQ - to delete state pyramidal - to add Cornet as example variety state 3 - to read state truncate (1), rounded (2), pointed (3)
Char. 7	- state 1 to read “absent or weak” - to add (a)
Char. 8	to add “Blonde à Coeur plein” as example variety for state 3 - to read “Leaf: inflexing of upper part” with states weak (1). medium (2), strong (3)
Char. 10	to delete “maximum”

Char. 11	- to delete “maximum” - to add example varieties
Char. 12	to read medium obovate for state 3
Char. 13	- to be combined with characteristic 14 - to have states light yellowish green (1), medium yellowish green (2), dark yellowish green (3), very light green (4), light green (5), medium green (6), dark green (7), very dark green (8), light greyish green (9) , medium greyish green (10), dark greyish green (11) - to provide example varieties
Char. 14	to be combined with characteristic 13
Char. 20	- to add (+) and example variety for state 3 - to add “Grosse Bouclée 2” as example variety for state 5 - to add “Gigance” as example variety for state 7
Char. 22	to read “Leaf: ratio length of part of leaf without lobes/ total length of leaf”
Char. 24	- to read “Leaf: anthocyanin coloration at base” - to have 3 states with notes 1 to 3 - states to read absent or weak (1), medium (2), strong (3) - to add example varieties “D’été à cœur jaune” (1), “De Meaux” (3) - to be indicated as QN - to delete white and pink states
Char. 25	to add (+)
Char. 26	to add (+)
Char. 28	state 1 to read “narrow elliptic”
Char. 30	to be indicated as MG
Ad. 6	to replace photos by illustration to remove pyramidal state
Ad. 8	to add illustration
Ad. 10	for note 7 ruler is missing
Ad. 11	illustration to be provided
Ad. 16	to replace photograph with illustration
Ad. 17	to replace photograph with single illustration
Ad. 23	to improve explanation, to explain absolute width
TQ 7.1	to add growth types and growth sub types
TQ 7.3	to delete request for photograph

*Leaf Chicory (*Cichorium intybus *L. var.* foliosum *Hegi) (Revision)*

66. The subgroup discussed document TG/154/4(proj.1), presented by Mr. Pascal Coquin (France), and agreed the following:

2.3	to read “The minimum quantity of plant material, to be supplied by the applicant, should be: 10.000 seeds”
Char. 1	- to add subtype Variegata (8) with example varieties “Variegata di Lusia” and “Variegata di Castelfranco” - state 7 to read “Catalogna Punterelle” - to delete characteristic 1 and to move information on sub-types to chapters 5.3 and 8.1 (see Test Guidelines for Lettuce)
Char. 3	- to delete information in brackets - to be indicated as VG/MG
Char. 5	- to add (+) and to move information in brackets to chapter 8.2 - to be indicated as VG/MG
Char. 6	- to be indicated as VG/MG - to add (+)

Char. 7	- to be indicated as VG/MG - state 2 to read “medium elliptic” - to add (+)
Char. 8	to be indicated as PQ
Char. 11	- to be indicated as PQ - to add (+)
Char. 12	to add (+) and to move explanation on harvest maturity to Ad. 12
Char. 13	to be deleted
Char. 14	- to be indicated as PQ - to add (+)
Char. 15	to add (+)
Char. 16	to have notes 1 to 5
Char. 17	- to have notes 1 to 5 - to add (+)
Char. 18	to read “Leaf: incisions of margin” and to have states absent or very shallow (1) to very deep (9)
Char.19	to add (+)
New char. after 20	to read “Only varieties with: Head formation: present: Time of head formation” with states very early (1) to very late (9)
Char. 22	to add (+)
Char. 23	- to add example varieties for states 1 and 9 - to check method of observation (VG/MS?)
Char. 24	to delete state 1 and to renumber other states from 1 to 4 to add (+)
Char. 25	- to be indicated as PQ - to add example varieties - to add (+)
Char. 26	to be indicated as PQ
Char. 27	to provide example varieties following example of Lettuce, Ad. 18, 19
Char. 29	to be deleted
Char. 30	- to add to be indicated as PQ - to have following states and example varieties: entire (1) with “Red Devil” diffused only (2) in patches only (3) with “Variegata di Lusia” diffused and in patches (4), with “Variegata di Castelfranco” densely speckled (5) with “Tauro”
Char. 31	to add (+) and to move explanation on harvest maturity to Ad. 31
Char. 33	to delete state “pink”
Char. 34	to be deleted
Char. 36	to be deleted
Char. 37	to be deleted
Ad. 1	to correct photo for sub-type Trevise (2) if used for information on subtypes in chapter 8.1 (see char. 1)
Ad. 5, 12, 31	to illustrate harvest maturity for different sub-types
Ads 6, 7, 11, 13, 14, 15, 17, 19, 22, 24, 31	photographs, illustrations to be provided

*Lettuce (*Lactuca sativa *L.) (Partial revision: disease resistance)*

67. The subgroup discussed document TWV/46/31 "Partial Revision of the Test Guidelines for Lettuce", presented by Mr. Akihiro Furui (Japan), and agreed the following:

Char 42.	to be indicated as VG to add "Cobham Green" as example variety for Race 1 to delete Race 2
Ad. 42 9.3 11.4	to read Susceptible: Cobham Green, Salinas , Patriot to add Remarks: Cobham Green is slightly less and Salinas is less susceptible than Patriot to be deleted
Char. 43	to be deleted

67. The subgroup discussed document TWV/46/35 "Proposed Partial Revision of the Test Guidelines for Lettuce", presented by Mr. Kees van Ettekoven (Netherlands), It agreed with presented proposal of a partial revision of the Test Guidelines for Lettuce (document TG/13/10 Rev.) in order to amend Characteristic: Resistance to downy mildew (*Bremia lactuca*) as follows:

(a) to revise the example varieties
(b) to provide a revised explanation for resistance to downy mildew according to the explanations for disease resistance characteristics in Test Guidelines, as set out in document TGP/12/2 Draft 2 "Guidance on Certain Physiological Characteristics", Section 2.4.

*Opium/Seed Poppy (*Papaver somniferum *L.) (Revision)*

68. The subgroup discussed document TG/166/4(proj.2), presented by Mrs. Marianna Fehér (Hungary), and agreed the following:

1.	- to delete "excluding ornamental varieties" - to add "In the case of ornamental varieties, in particular, it may be necessary to use additional characteristics or additional states of expression to those included in the Table of Characteristics in order to examine Distinctness, Uniformity and Stability."
5.3	to add characteristic 3 "Rosette leaf" to delete (a) seasonal type
Table of Chars.	to delete "(w)" after example varieties
Char. 1	to be deleted
Char. 3	to add (+)
Char. 4	- to delete "(upper side)" and to move to Ad. 4 - to read "Rosette leaf: color" and to have states yellowish green (1), green (2), bluish green (3) - to add (+)
Char. 5	- to be indicated as QN - to have notes 1 to 3 - to delete "(upper side)" and to move to Ad. 5
Char. 8	- to add (+) - to move indication in brackets to Ad. 8
Char. 9	- to read "hairiness" - to add (+) - to move indication in brackets to Ad. 8
Char. 11	- to be combined with characteristic 12 and read Petal: color: white (1), light pink (2), medium pink (3), dark pink (4), red (5), light violet (6), medium violet (7), dark violet (8) - to have example variety "Edel-rot" for dark pink (4) and to add "Danish flag" as example variety for red (5)" - to change grouping & TQ
Char. 13	to be deleted

Char. 14	- to read “Petal: blotch” - to add state none (1) and to have 4 states
Char. 15	- to be combined with characteristic 16 - to check example varieties - to add example variety “Danish flag”for state 1
Char. 17	- to read “Petal: extension of blotch” and to have states below the widest part (1), the widest part of petal (2), above the widest part of petal (3) - to delete example variety “Ametiszt”
Char. 18	to add (+) to add example variety “Danish Flag”for present (9)
Char. 19	to be deleted
Char. 23	to have states oblate (1), truncate (2), round (3)
Char 24	state 2 to read “truncate”, state 3 to read “depressed”
Char. 25	- to move indication in brackets to Ad 25 - to read “Capsule:length” - to delete states 1 and 9 - to delete example variety “Ametiszt”
Char. 26	- to delete states 1 and 9 - to delete example variety “Ametiszt”
Char. 27	- to read “Capsule:ribbing” - to add (+) and provide illustration - to be indicated as VS - to provide explanation
Char. 29	states to read erect (1), semi- erect (2), horizontal (3), declined (4), decumbent (5) to add photos
Char. 31	“rectangular” to be replaced by “truncate”
Char. 32	- to replace “ochre” by color e.g. yellowish brown (state 2) - to add light bluish (6), medium bluish (7), dark bluish (8)
Char. 33	to be combined with characteristic 32
Char. 34	- to be indicated as MG - to delete example variety “Ametiszt”
Ad. 23	- to have states oblate (1), truncate (2), round (3) - to delete photos elliptic (3) and conical (2)
Ad. 24	state 2 to read “truncate”, state 3 to read “depressed”
TQ 4.1	to be deleted
TQ 5	to be updated
TQ 6	to add an example
TQ 7.2	to delete “summer” and “winter”

*Oyster Mushroom (*Pleurotus *(FR.) Quel.)*

69. The subgroup discussed document TG/PLEUR(proj.3), presented by Mr. Yong-Hyun Cho (Republic of Korea), and agreed the following:

Box and Cover page	to read “*Pleurotus ostreatus, Pleurotus eryngii, Pleurotus pulmonarius”* to add UPOV codes for each species botanical names to be checked
1.	*to replace “Pleurotus* (Fr) Quelto” by *“Pleurotus ostreatus, Pleurotus eryngii, Pleurotus pulmonarius”*
2.3	to add “2 liters of spawn or”
5.3	to delete “Cap: attachment” (characteristic 9) and to add “Fruit body: Cluster” (characteristic 13)
Table of Chars.	- example varieties to be checked and provided with indication of species - to delete indications (b)-(d)
Char. 1	to indicate on the drawing how to be measured/ observed

Char. 3	state 3 to read “pot-shaped”
Char. 4	state 3 to read “short”, state 7 to read “tall”
Char. 6	to read low (3) and high (7)
Char. 8	to delete states 2 and 3, and to have “medium brown” for state 5 and “medium grey” for state 6
Char. 11	to be deleted
Char. 12	- to read “Number of basidiospores” - to have states absent or very few (1), medium (2), many (3) - to add (+) and explanation on method of observation - VS to be replaced by VG
Char. 13	- to read “Fruit body: cluster” - to add (*)
Char. 14	to delete VG
8.1	to have key by species and to move to chapter 6
8.2	to read “All characteristics of the stipe and the cap should be recorded at fully developed stage before discoloration or aging.”
Ad. 3	to improve illustration
Ad. 4	to improve drawing
Ad. 9	to improve drawing for state 1 central
Ad. 12	to add explanation on method of observation
page 15	to delete “*P.cistidiusus* has two types of life cycle, sexual and asexual reproduction”
TQ 4.1	to follow the example of *Agaricus*
TQ 6	to check and provide an example

*Spinach (*Spinacea oleracea *L.) (Partial revision)*

70. The subgroup discussed document TWV/46/25, presented by Mrs. Marian van Leeuwen (Netherlands), and agreed the following:

Proposed new char.	- to read “Leaf: anthocyanin coloration of petioles and veins” - to be added after characteristic 1 - to add (*) - to add characteristic as grouping characteristic to chapters 5.3 and TQ 5 - to add (a)
Ad. to proposed new char.	to provide better photos

Tomato Rootstocks

71. The subgroup discussed document TG/TOM_ROOT(proj.3), presented by Mr. Kees van Ettekoven (Netherlands), and agreed the following:

General remark	to correct spelling of “*Solanum chesmanii*” to “*Solanum cheesmaniae*” in whole document
Cover page	- to add UPOV codes for all species to box on cover page - table for alternative names: to split table to have one row per species
1.2	to correct spelling of “*Solanum pimpinellifolia*” to “*Solanum pimpinellifolium*”
2.2	to read “The material is to be supplied in the form of seed.”

2.3	to read “The minimum quantity of plant material, to be supplied by the applicant, should be: 10g or 2500 seeds. In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. “
Char. 9	to have notes 1 to 3
Char. 10	to have notes 1 to 3
Char. 13	to have states broad oblate (1), narrow oblate (2), circular (3) and to add new state obovate (4)
Char. 14	to be indicated as VG/MS
Char. 18	- to have states very weak (1), weak (2), medium (3), strong (4), very strong (5) - to check example varieties
Char. 22	to be indicated as QN
Ad. 13	- to add “The apex is considered to be the part that is farthest from the stalk attachment.” - to add drawing from the Test Guidelines for tomato to new state obovate (4)
Ad. 21	paragraph on “Standard varieties” to read: “absent: Maxifort present: Body”
Ad. 22	- to delete 11.4 - to add sentence to 12.: “To consider that resistant varieties may have a few plants with a few galls. These are not considered as off-types.”
Ad. 23	to add after biotest under 13 “such hybrids are still considered resistant”
Ad. 24	to move last sentence “Standards near borderline R/S will help to compare between labs.” to 11.3
Ad. 26	- 11.4 to be deleted - to add sentence to 12.: “Excessively high humidity may cause rugged brown spots on all leaves. These are not to be considered as off-types”
TQ 1	to add all species indicated on cover page
TQ 4.1.2	to be deleted
TQ 5.6	title to read “Resistance to Verticillium sp. (Va and Vd) - Race 0”
TQ 6	to replace “He-Wolf” by the word example

*Tomato (*Solanum lycopersicum *L.) (Partial Revision)*

72. The subgroup discussed document TWV/46/25, presented by Mr. Kees van Ettekoven (Netherlands), and agreed the following:

Ad. 46	- 9.3: to delete “Madyta” (mentioned twice) - 11.4: to be deleted and to add sentence to 12.: “To consider that resistant varieties may have a few plants with a few galls. These are not considered as off-types.”
Ad. 48	to move last sentence “Standards near borderline R/S will help to compare between labs.” to 11.3
Ad. 50	- 11.4 to be deleted - to add sentence to 12.: “Excessively high humidity may cause rugged brown spots on all leaves. These are not to be considered as off-types”

*Watermelon (*Citrullus lanatus *(Thunb.) Matsum. et Nakai) (Revision)*

73. The subgroup discussed document TG/142/5(proj.3), presented by Mrs. Marian van Leeuwen (Netherlands), and agreed the following:

1.	to delete “Varieties belonging to *Citrullus colocynthis* (L)Schrad. are excluded”.
5.3	to delete “Leaf blade:degree of lobing” (characteristic 8)
Char.1	to delete example variety “Kimiwa Red Seedless” as example variety for state 2
Char.9	to delete “(on 10th to 15th leaf)”
Char.11	to delete ”(1st mature fruit)”
Char.12	state 4 to read “narrow elliptic”
Char. 13	to have 5 states with absent or very shallow (1) to very deep (5)
Char. 14	state (1) to read “truncate” instead of “flat”
Char. 15	to have 5 states with states absent or very shallow (1) to very deep (5)
Char. 17	- to add example varieties for state 2 “Ipanema” and “Ovation, Talete” for state 6 - states to read yellow (1), very light green (2), very light to light green (3), light green (4), light to medium green (5), medium green (6), medium to dark green (7), dark green (8), dark to very dark green (9), very dark green (10). - to be indicated as PQ
Char. 18	to be combined with characteristic 17
Char 19	- to read state 1 “inconspicuous or very weakly conspicuous” - to provide example variety
Char. 20	- to read “Pattern of stripes” - state 1 to read “only one colored” - to check example varieties - to delete “Charleston gray” for state 6
Char. 21	to delete “Charleston Gray” for state 1
Char. 22	to read “Fruit: main color of stripes” and to have states yellow (1), very light green (2), light green (3), medium green (4), dark green (5), very dark green (6) - to be indicated as PQ
Char. 23	to read state 1 “inconspicuous or very weakly conspicuous”
Char. 24	to reverse order of states
Char. 26	to add (+)
Char. 30	to be combined with char. 31, to add dark red as state 7 to add example variety Dixie Lee for state 7
Char. 31	to be deleted
Char. 32	to be deleted
Char. 33	- to delete state “very small” - to revise example varieties - to delete MS
Char. 34	- state 1 to read “none or few“ - to be indicated as VG and QN
Char. 35	- to read ’Seed: length”and to have states very short (1) to very long (9) - to check and add example varieties
Char. new	- to add after char. 35 - to read “Only diploid and tetraploid varieties: Seed: ratio length/ width”and to have states very small (1), small (2), medium (3), large (4), very large (5)
Char. 36	to add (*)
Char. 37	“secondary color” to be replaced by “over color”
Char. 38	to be deleted
Char. 39	- “secondary color” to be replaced by “over color” - state 1 to read “very small”
Char. 40	- to have 3 states absent or very weak (1), medium (2), strong (3) - to be indicated as QN
Char.41	to add (+) and to move (50 % of plants with at least one female flower) to Ad. 41

Char. 42	to be deleted
Chars. 43 and 44	to be indicated as QL and VG
Char. 44	to check example varieties
Chars. 44.2 and 44.3	to be deleted
Ad. 12	to provide illustration in form of a grid
Ad. 14	to improve photo for state 5
Ad. 16	to change the photo of state 1, and delete first photo of state 2
Ad. 16, 20, 21, 22, 23, 24	to move (in the case of striped fruits ….color) to chapter 8.1 (c) and to reword according to characteristics
Ad. 20	to provide a better photo for example varieties for stage 4
Ad. 26	to add explanation concerning absolute size
Ad. 29	to add explanation on absolute thickness of pericarp and to provide better photos
Ad. 43 and 44	to read “11.2 lesions ≥2mm etc. 12 [1] lesions equal to or more than 2 mm in size”
TQ 4.1	to be deleted and to follow the example of the Test Guidelines for Tomato Rootstock

Matters to be resolved concerning Test Guidelines adopted by the Technical Committee

74. The TWV noted that the Japanese Authorities use another type of material to be submitted (“sawdust”) and proposed to Japan to consider proposing a partial revision of the Test Guidelines for Shiitake, adopted by the Technical Committee in 2012, in order to add “sawdust” as material to be supplied to Chapter 2.2 (a).

Recommendations on draft Test Guidelines

(a) Test Guidelines to be put forward for adoption by the Technical Committee

75. The TWV agreed that the following draft Test Guidelines should be sent to the TC for adoption at its forty-ninth session, to be held in Geneva in March 2013, on the basis of the following documents and the comments in this report:

Subject	Basic Document (2012)
Coriander (*Coriandrum sativum* L.)	TG/CORIA(proj.3)
*Endive (*Cichorium endivia* L.) (Revision)	TG/118/5(proj.2)
*Lettuce (*Lactuca sativa* L.) (Partial revision: disease resistance)	TG/13/10 Rev., TWV/46/31
*Opium/Seed Poppy (*Papaver somniferum* L.) (Revision)	TG/166/4(proj.2)
*Oyster Mushroom (*Pleurotus* (FR.) Quel.)	TG/PLEUR(proj.3)
*Spinach (*Spinacea oleracea* L.) (Partial revision)	TG/55/7 Rev., TWV/46/32
*Tomato (*Solanum lycopersicum* L.) (Partial Revision)	TG/44/11, TWV/46/25
* Tomato Rootstocks	TG/TOM_ROOT(proj.3)
*Watermelon (*Citrullus lanatus* (Thunb.) Matsum. et Nakai) (Revision)	TG/142/5(proj.2)

(b) Test Guidelines to be discussed at the forty-seventh session

76. The TWV agreed to discuss the following draft Test Guidelines at its forty-seventh session:

Subject
Bottle Gourd, Calabash (*Lagenaria siceraria* (Molina) Standl.)
Brown Mustard (*Brassica juncea* (L.) Czern)

*Cassava (*Manihot esculenta* Crantz.)
Chives (*Allium schoenoprasum L.*) (Revision)
Cucumber (*Cucumis sativus* L.) (Partial revision: existing disease resistance)
Cucurbita maxima x Cucurbita moschata (Rootstocks)
Leaf Cichory (*Cichorium intybus* L. var. *foliosum* Hegi) (Revision)
Lentil (*Lens culinaris* Medik.) (Revision)
Melon (*Cucumis melo* L.) (Partial revision: existing disease resistance)
*Pea (*Pisum sativum* L.) (Partial revision: grouping characteristics)
Sweet Pepper, Hot Pepper, Paprika, Chili (*Capsicum annuum* L.) (Partial revision: existing disease resistance)
Witloof, Chicory (*Cichorium intybus* L. partim) (Revision)

77. The leading experts, interested experts and timetables for the development of the Test Guidelines are set out in Annex III.

Guidance for drafters of Test Guidelines

78. The TWV noted the revision of the "Practical Guidance for Drafters (Leading Experts) of UPOV Test Guidelines", Section "Test Guidelines for Discussion at the Technical Working Party", as available on the TG Drafters webpage (see document TC/48/3). The revision concerned the information that "a 'clean' version of the draft should be provided: the draft should not contain any comments within the document. If necessary, any comments should be included in an annex or in a separate document".

79. The TWV noted that, if a Leading Expert of a draft Test Guidelines could not attend a TWP session, the Test Guidelines could be withdrawn from the agenda of the concerned TWP session. If the Leading Expert and the interested experts wished, an informal subgroup discussion via WebEx after the TWP, could be organized with the support of the Office of the Union.

80. The TWV received a presentation on the project for a web-based TG Template for drafters of Test Guidelines and was invited to provide feedback and input. A copy of the presentation is provided in document TWV/46/40.

81. The TWV noted the features of the proposed TG Template and commented that it would be useful to be able to track changes. The TWV also proposed to include example varieties in the database in order to select appropriate example varieties from a drop down menu.

82. The TWV noted the offer of assistance during the process of the creation of the web based TG template made by the Netherlands.

83. The TWV requested information on the timeline for the creation of the web-based TG Template and proposed to schedule tests creating draft Test Guidelines for Technical Working Party sessions as soon as possible.

Information and databases (continued)

(a) UPOV information databases

84. The TWV noted the information provided in document TWV/46/5.

85. With regard to Annex V "UPOV codes to be checked by authorities", the experts of the TWV were invited to provide comments to the Office of the Union by August 31, 2012.

(b) Variety description databases

86. The TWV noted the information contained in document TWV/46/6 and in the presentation provided by an expert from France, which would be included in an addendum to document TWV/46/6. The expert from France presented a method to evaluate different grouping characteristics for Pea. The TWV congratulated the expert from France for his work and the useful results contained in the presentation. The TWV agreed that the work on the project for the Pea database should be continued and that it would be a good example

for the development of similar databases for other crops. It also agreed that it would be a good basis for future revision of the Test Guidelines for Pea in respect of grouping characteristics.

(c) Exchangeable software

87. The TWV noted the information provided in document TWV/46/7.

(d) Electronic application systems

88. The TWV noted the information provided in document TWV/46/8.

Date and Place of the Next Session

89. At the invitation of Japan, the TWV agreed to hold its forty-seventh session in Nagasaki, Japan, from May 20 to 24, with the preparatory workshop on May 19, 2013.

Future Program

90. The TWV proposed to discuss the following items at its next session:

1. Opening of the Session
2. Adoption of the agenda
3. Short reports on developments in plant variety protection
   (a) Reports from members and observers (oral reports by the participants)
   (b) Reports on developments within UPOV (oral report by the Office of the Union)
4. Molecular Techniques (document to be prepared by the Office of the Union)
5. TGP documents
6. Variety denominations (document to be prepared by the Office of the Union)
7. Information and databases
   (a) UPOV information databases (document to be prepared by the Office of the Union)
   (b) Variety description databases (document to be prepared by the Office of the Union and documents invited)
   (c) Exchangeable software (documents to be prepared by the Office of the Union)
   (d) Electronic application systems (document to be prepared by the Office of the Union)
8. Uniformity assessment
9. Levels of Uniformity According to the State of Expression of Obligatory Disease Resistance Characteristics and Varieties not bred for having such Disease Resistance (document to be prepared by the European Union)
10. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if appropriate)
11. Discussion on draft Test Guidelines (Subgroups)
12. Recommendations on draft Test Guidelines
13. Guidance for drafters of Test Guidelines
14. Date and place of the next session
15. Future program
16. Report on the session (if time permits)
17. Closing of the session

Visit

91. In the afternoon of June 13, 2012, the TWV visited the facilities of Nunhems Netherlands B.V., the vegetable and seed business of Bayer CropScience, in Nunhem. The TWV was welcomed by Mr. Uwe Dijkshoorn, Brand Manager, and visited several stations including the processing center, seed conditioning, osmopriming, pelleting and coating areas. It also received information on the Asparagus breeding work of Nunhems.

92. *The TWV adopted this report at the close of the session.*

[Annex I follows]

ANNEX

LIST OF PARTICIPANTS

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VI. ELECTRONIC CONFERENCE PARTICIPANTS

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[Annex II follows]

ANNEX II

PRESENTATION MADE BY MR. NICO KOOMEN, DIRECTOR OF NAKTUINBOUW AND PRESIDENT OF THE DUTCH HORTICULTURAL COUNCIL

Floriade 2012 Venlo
'Experience in Horticulture'

Ir. N.C.A. Koomen
President Dutch Horticultural Council

The context

- A World Expo
- Only one in Holland: horticulture
- Inspired by London (1851, Crystal Palace), Paris (Eiffel Tower), Brussels (1958, Atomium)
- The sixth edition, after Rotterdam (1960), Amsterdam (1972), Amsterdam (1982), Zoetermeer (1992) and Haarlemmermeer (2002)

The responsibilities

- Bureau International d'Expositions in Paris (since 1928)
- International Association of Horticultural Producers (AIPH), authorized by BIE for Horticultural (World) Expo's
- Floriade is A1-category

Involved

- BIE, Mr. Dzsingisz Gabor supervises as Commissioner-general on behalf of the Dutch Government
- AIPH-regulations, 6 months, 50 hectares, at least 10 participating countries
- Dutch Horticultural Council promotes the values of horticulture: healthy food, attractivity/leisure of flowers and green environment, green engine, education/innovation, sustainability. Incentives for Venlo: children, business meetings (conferences) and new media.

What's up

- Compact Floriade with 5 sections
- Excellent landscaping
- Horticultural experience (what is the added value for quality of life?)
- Perfect exposure
- Attractive for young visitors
- Clear idea about what happens after the Floriade 2012

Floriade in the future

- Again a world horticultural Expo
- In 2022
- Early commitment with participants (from the Netherlands and abroad)
- Making of for 2022 starts in 2013
- 'Cross overs' with sport (health, healthy food) and water
- 4 candidates for 2022: Amsterdam, Almere, Region Boskoop and Groningen
- Choice for 2022 at closing session in Venlo (7 October 2012)

PRESENTATION MADE BY MR. MARIEN VALSTAR, REPRESENTATIVE OF THE MINISTRY OF ECONOMIC AFFAIRS, AGRICULTURE AND INNOVATION

Ministry of Economic Affairs, Agriculture and Innovation

TWV UPOV meeting
in The Netherlands

June 11

Main items of this presentation

- Why Plant Breeding
- Some numbers of the Dutch seed sector
- Role of the government of The Netherlands
- Some recent issues
  - Plant Breeders Rights vs Patent Rights
  - Use of new technologies

2

The Values of Plant Breeding

- Plants are the base of almost every food or feed-chain
- There are many alarming reports on volatile food prices and on the need to produce more food for a growing wordt population
- Experts agree that we need to double the food production in the coming decades
- We also need to develop an renewable economy, less based on fossil inputs (oil, phospates, etc)
- And we need to do this in a sustainable way, with less land, less fertilizer and less pesticides
- Improving the genetics of plants is a very important tool towards a sustainable agriculture
- New and improved varieties add value to the whole production chain, from growers to consumers

3

What do we want from new varieties

- Growing world population –more yield
- Changing consumption patterns
  - more proteins
  - other consumer demands
  - Bio-based economy
- Better adaptation to:
  - Salination – dry conditions
  - Climate change
  - Less inputs
    - energy costs (nitrogen),
    - phosphates

4

The Netherlands and breeding

- The Netherlands is a major stakeholder, both private (companies) as public (research, university)
- In the Netherlands there are approx. 350 breeding companies with an annual turnover of approx. € 2.5 billion
- Many of them are SME's
- 15-30 % of their annual turnover is spent on R&D
- Yearly private investment is € 250 -350 million ($ 350 – 475 million)
- 55% of vegetables, 50% of ornamentals, 40% of potatoes in Europe are coming from the Netherlands
- The Netherlands' Examination Office (Naktuinbouw) plays a significant role in DUS-testing for the CPVO

5

The seed and propagating material sector in The Netherlands - 1

- Breeding industry in The Netherlands is world market leader for the sectors:
  - potatoes
  - vegetables
  - ornamentals
- 24% of value of world export of seeds and propagating material is from the Netherlands
- Exports to every part of the world
- 47% of European use of seeds and propagating material is from the Netherlands

6

The seed and propagating material sector in The Netherlands - 2

- Yearly 1500 applications for new varieties
  - 1000 applications for European Community PBR
  - 500 applications for national PBR

7

Role of the Dutch government

- Legislator: Seed and plant propagating material law
- Effective PBR system
- Financing Wageningen University
- Financial support of pre-competitive technology R&D through public-private partnerships (TTI-Green Genetics)
- Support projects, directed to knowledge transfer to other countries
  - Breeding
  - Plant Variety Protection
  - Dus-testing

8

Interference with the Patent System

- NL is a strong supporter of UPOV, is one of the founding fathers
- Genetic sources should be as accessible as possible in order to facilitate the development of new varieties
- With the introduction of biotechnology also other forms IP-protection is coming up – patents instead of PBR's
- There is a difference: with Plant Breeders Rights there is also the Breeders exemption which makes the protected variety available to other breeders
- With patented material you need a licence to use it → so patents have a stronger protection
- Through patenting of plant genes and traits genetic material can get ''locked up'', because in the patent system there is no breeders' exemption.
- A study we conducted on this topic concluded this may slow down the rate of innovation and there is a need to find a new balance between patents and Plant Variety Rights

9

Interference with the Patent system

2009 – Plantum:Patent Law is a threat to the rate of innovation in the plant breeding sector. 3 main positions on this theme

1. Biological material protected by patent rights should be freely available for the development of new varieties
2. The use and exploitation of these new varieties should be free, in line with the 'breeders' exemption' of the UPOV Convention
3. The free availability, use and exploitation should not be allowed to be obstructed in any way, either directly or indirectly, by patent rights

Consequence: Introduction of a Breeders Exemption in (Bio)Patent Law – at least on a EU level, probably globally (TRIPS)

10

Interference with the Patent System

- We had a few debates in our Parliament. We will introduce a limited Breeders Exemption in our national Patent Law.
- A limited BE makes the genetic material accessible without a licence, but if the protected trait is still in the new variety, a license is still needed for marketing.
- Further steps can only be taken on European or worldwide level
- In time review the European legislation on (Bio)patents will be reviewed
- We think patents are too easily granted
- But also the industry has to work on a industry–wide licensing platform under FRAND-conditions
- Both UPOV and WIPO should intensify the exchange of information and knowledge in this field

11

How to make use of modern tools

- We are in the middle of a ''Genetic Revolution'' that has given rise to new insights and possibilities
- Scientific and technological breakthroughs in the field of plant sciences and plant breeding have given rise to faster development and more targeted breeding
- EDV-issues can/will arise more frequently
- How to use these tools in DUS-testing?
- Our regulatory environment has difficulties to keep up with these developments
- Bio Molecular Tools guidelines will have to keep developing to keep up with developments

12

[Annex III follows]

ANNEX III

LIST OF LEADING EXPERTS

DRAFT TEST GUIDELINES TO BE SUBMITTED TO THE TECHNICAL COMMITTEE IN 2013

All requested information to be submitted to the Office of the Union **before July 27, 2012**

Species	Basic Document	Leading expert(s)
Coriander (*Coriandrum sativum* L.)	TG/CORIA(proj.3)	Mr. Ricardo Zanatta Machado (BR)
*Endive (*Cichorium endivia* L.) (Revision)	TG/118/5(proj.2)	Mrs. Marian van Leeuwen (NL)
*Lettuce (*Lactuca sativa* L.) (Partial revision: disease resistance)	TG/13/11, TWV/46/31, TWV/46/35	Mr.Akihiro Furui (JP), Mr. Kees van Ettekoven (NL)
*Opium/Seed Poppy (*Papaver somniferum* L.) (Revision)	TG/166/4(proj.2)	Mrs. Marianna Feher (HU)
* Oyster Mushroom (*Pleurotus* (Fr.) Quel.)	TG/PLEUR(proj.3)	Mr. Yong-Hyun Cho (KR)
*Spinach (*Spinacea oleracea* L.) (Partial revision)	TG/55/7 Rev., TWV/46/32	Mr. Kees van Ettekoven (NL)
*Tomato (*Solanum lycopersicum* L.) (Partial Revision)	TG/44/11, TWV/46/19	Mr. Kees van Ettekoven (NL)
* Tomato Rootstocks	TG/TOM_ROOT(proj.3)	Mr. Kees van Ettekoven (NL)
*Watermelon (*Citrullus lanatus* (Thunb.) Matsum. et Nakai) (Revision)	TG/142/5(proj.3)	Mrs. Marian van Leeuwen (NL)

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWV/47
(* indicates possible final draft Test Guidelines)

New draft to be submitted to the Office of the Union
by April 5, 2013

(Guideline date for Subgroup draft to be circulated by Leading Expert: (February 8, 2013)
Guideline date for comments to Leading Expert by Subgroup: (March 8, 2013)

Species	Basic Document	Leading expert(s)	Interested experts (State / Organization)
Bottle Gourd, Calabash (*Lagenaria siceraria* (Molina) Standl.)	TG/LAGEN(proj.1)	Mrs.Chrystelle Jouy (FR)	JP, KR, NL, QZ, UA, ESA, ISF, Office
Brown Mustard (*Brassica juncea* (L.) Czern.)	New	Mr. Yoshiyuki Ohno (JP)	TWA, CZ, DE, KR, NL, PL QZ, ESA, ISF, Office
*Cassava (*Manihot esculenta* Crantz.)	TG/CASSAV(proj.3) (rev.), TWV/46/33	Mr. Caleb Obunyali (KE) / Mr. Fabricio Santana Santos (BR)	TWA, CO, JP, ISF, Office
Chives (*Allium schoenoprasum L.*) (Revision)	TG/198/2(proj.1)	Mr.Kees van Ettekoven (NL)	CZ, DE, FR, IT, PL, QZ, UA, ESA, ISF, Office
Cucumber (*Cucumis sativus* L.) (Partial revision: existing disease resistance)	TG/61/7	Mr. Raoul Haegens (NL)	ES, FR, HU, IT, JP, QZ, UA, ESA, ISF, Office
Cucurbita maxima x Cucurbita moschata (Rootstocks)	New	Mrs. Chrystelle Jouy (FR)	ES, HU, IT, JP, KR, NL, UA, ESA, ISF, Office
Leaf Cichory (*Cichorium intybus* L. var. *foliosum* Hegi) (Revision)	TG/154/4(proj.1)	Mr. Pascal Coquin (FR)	IT, NL, QZ, ESA, ISF, Office
Lentil (*Lens culinaris* Medik.) (Revision)	TG/210/1	Mr. Pascal Coquin (FR)	ES, HU, IT, PL, UA, ISF, Office
Melon (*Cucumis melo* L.) (Partial revision: existing disease resistance)	TG/104/5	Mr. Raoul Haegens (NL), Mrs. Chrystelle Jouy (FR)	BR, ES, HU, IT, JP, QZ, UA, ESA, ISF, Office
*Pea (*Pisum sativum* L.) (Partial revision: grouping characteristics)	TG/7/10	Mr. François Boulineau (FR)	TWA, BR, CZ, DE, ES, GB, HU, JP, NL, PL, QZ, SK, UA, ESA, ISF, Office
Sweet Pepper, Hot Pepper, Paprika, Chili (*Capsicum annuum* L.) (Partial revision: existing disease resistance)	TG/76/8	Mr. Raoul Haegens (NL), Mrs. Chrystelle Jouy (FR)	BR, ES, FR, HU, IT, JP, KR, QZ, UA, ESA, ISF, Office
Witloof, Chicory (*Cichorium intybus* L. partim) (Revision)	TG/173/3	Mr. Pascal Coquin (FR)	IT, NL, QZ, ESA, ISF, Office

[End of Annex III and of document]