

Technical Working Party for Vegetables

TWV/56/22

Fifty-Sixth Session**Original:** English**Virtual meeting, April 18 to 22, 2022****Date:** April 22, 2022

REPORT*Adopted by the TWV at the close of the session**Disclaimer: this document does not represent UPOV policies or guidance*Opening of the session

1. The Technical Working Party for Vegetables (TWV) held its fifty-sixth session, organized by electronic means, from April 18 to 22, 2022. The list of participants is reproduced in Annex I to this report.
2. The session was opened by Ms. Marian van Leeuwen (Netherlands), Chairperson of the TWV, who welcomed the participants.

Adoption of the agenda

3. The TWV adopted the agenda as presented in document TWV/56/1 Rev..

Short Reports on Developments in Plant Variety Protection*(a) Reports on developments in plant variety protection from members and observers*

4. The TWV noted the information on developments in plant variety protection from members and observers, provided in document TWV/56/3 Prov. The TWV noted that reports submitted to the Office of the Union after April 08, 2022 and until April 22, 2022, would be included in the finalized version of document TWV/56/3.

(b) Reports on developments within UPOV

5. The TWV received a presentation from the Office of the Union on developments within UPOV, a copy of which would be provided in document TWV/56/2.

Development of guidance and information materials

6. The TWV considered document TWP/6/1.

*Matters for consideration by the Technical Working Parties*Document UPOV/INF/23 "UPOV Code System"

7. The TWV agreed to revise document UPOV/INF/23 "Guide to the UPOV Code System" to clarify the maximum number of characters to be used in the appended element to UPOV codes, as set out in document TWP/6/1, paragraph 13.

Document TGP/7 “Development of Test Guidelines”

Example varieties for asterisked quantitative characteristics when illustrations are provided

8. The TWV considered the proposal to amend document TGP/7 to remove the requirement to provide example varieties for asterisked quantitative characteristics if illustrations are provided, as set out in document TWP/6/1, paragraphs 18 and 19.

9. The TWV agreed that example varieties should continue to be provided for asterisked quantitative characteristics for vegetable crops. The TWV agreed that example varieties could be easily provided for vegetable crops and were useful for harmonizing DUS examination and producing variety descriptions. The TWV recalled that guidance in document TGP/7 required example varieties for three or two states of expression, according to the scale of notes used.

Indication of grouping characteristics in UPOV Test Guidelines (Table of characteristics and TQ 5)

10. The TWV agreed to revise document TGP/7 “Development of Test Guidelines” to indicate characteristics in the table of characteristics and technical questionnaire used as grouping characteristics, as set out in document TWP/6/1, paragraph 22.

Converting standard wording in Test Guidelines into optional wording

11. The TWV agreed to amend document TGP/7 “Development of Test Guidelines” to convert the standard wording in the Test Guidelines template, paragraph 4.2.2, into additional standard wording (optional), as set out in document TWP/6/1, paragraph 25.

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

The Combined Over Years Uniformity Criterion (COYU)

12. The TWV considered document TWP/6/11.

13. The TWV noted that software for COYU Splines would be under evaluation and planned to be implemented in the United Kingdom from 2022.

14. The TWV noted that evaluation versions of software for COYU Splines had been made available in August 2021. The TWV noted the invitation for members of the Union to participate in the test campaign of the COYU Splines software and report outcomes to the expert from the United Kingdom.

15. The TWV noted the request for the TWM to prepare a report of the results of the test campaign of the software for COYU Splines for consideration by the TC, at its fifty-eight session, in conjunction with the revision of document TGP/8.

Document TGP/12 ‘Guidance on certain physiological characteristics’

Word “highly” in only one state of expression

16. The TWV considered whether to revise the states of expression in the example characteristic in document TGP/12/2, Section 2.3.2, to address the use of the word “highly” in only one state of expression.

17. The TWV noted that the scale “susceptible; intermediately resistant; and highly resistant” had been previously used in the Test Guidelines for Cucumber, Lettuce and Melon and was commonly used in the vegetable sector.

18. The TWV noted the explanation from France that state of expression “susceptible” covered a range of expressions, including “highly susceptible”. The TWV discussed how to apply general UPOV guidance for drafting disease resistance characteristics and agreed there was no consensus to amend guidance in document TGP/12 to delete the word “highly” from state of expression “highly resistant”.

19. The TWV agreed to invite the experts from France and the Netherlands to propose draft guidance explaining the particular features of disease resistance characteristics that require special treatment in relation to general UPOV guidance, to be presented to the TWV, at its fifty-seventh session. The draft guidance should address matters such as establishing clear distinctness for quantitative disease resistance characteristics on the basis of a difference of one note between varieties; and explore possibilities for correlating the scales of UPOV characteristics with those used by phytopathologists for variety descriptions (e.g.: UPOV “Resistant” = phytopathology “Highly Resistant”).

20. The TWV agreed that state “intermediate” in the example provided in document TWP/6/1, paragraph 28, should read “intermediate resistant”.

Matters for information

21. The TWV noted the following matters for information presented in document TWP/6/1:

- The outcomes of discussion on a proposal to revise document TGP/5, Section 6 “UPOV Report on Technical Examination and UPOV Variety Description” to include additional information in DUS test reports and alternative approaches to enhance the use of existing DUS test reports, as presented in Annex VI;
- Discussions on a proposal for the addition of state of expression and placement of non-asterisked disease resistance characteristics in the Technical Questionnaire, Section 5, as presented in Annex VII;
- Matters for adoption by the Council in 2022, as presented in Annex VIII; and
- The program for the development of relevant guidance and information materials, as presented in Annexes IX and X.

Information and databases

(a) UPOV information databases

22. The TWV considered document TWP/6/4.

GENIE database

23. The TWV noted that 131 new UPOV codes were created in 2021 and a total of 9,342 UPOV codes are included in the GENIE database.

Proposals for amending UPOV codes

24. The TWV noted the amendments agreed by the TC, at its fifty-seventh session, to the UPOV codes for *Beta vulgaris*, *Brassica oleracea*, *Citrus*, *Zea mays*, *Aloe aristata* and *Dicentra spectabilis* as set out in paragraphs 15 to 26 of document TWP/6/4.

25. The TWV noted that members of the Union and contributors of data to the PLUTO database would be informed of the changes to UPOV codes and the date of the changes by means of a circular in advance.

Replacing botanical nomenclature of Brassica oleracea by variety groups

26. The TWV received a presentation on “Use of Variety Groups in the UPOV system for *Brassica oleracea* and other vegetable crops” from an expert from the Netherlands. A copy of the presentation is provided in document TWV/56/13.

27. The TWV received a presentation on “UPOV codes for *Cichorium intybus*” from an expert from the Netherlands. A copy of the presentation is provided in document TWV/56/15.

28. The TWV agreed that variety groups should be used to replace complex infraspecific botanical names, such as for *Beta vulgaris*, *Brassica oleracea* and *Cichorium intybus*. The TWV agreed to invite the Netherlands to further develop the proposal to create variety groups for *B. vulgaris*, *B. oleracea* and *C. intybus*, to be presented at the fifty-seventh session of the TWV.

29. The TWV noted the amendments to UPOV codes agreed by the TC, at its fifty-seventh session, to append information to the UPOV codes for *B. vulgaris*, *B. oleracea*, *Citrus* and *Zea mays*, as set out in paragraphs 15 to 26 of document TWP/6/4. The TWV agreed to invite the Office of the Union to develop proposals for revising the UPOV codes with appended information according to the approach to use variety groups for complex botanical names, to be presented at the fifty-seventh session of the TWV.

30. The TWV recalled that, at its fifty-fourth session, it had noted that approximately 1200 varieties with UPOV code CICHO_INT in the PLUTO database could not be allocated with certainty to any variety group. The TWV agreed to invite contributors to the PLUTO database to further precise whether the varieties belonged to the groups “forage-”, “industrial-”, “leaf-” or “witloof-chicory”.

PLUTO database

31. The TWV noted the summary of data contributions from members of the Union to the PLUTO database from 2017 to 2021, as presented in document TWP/6/4, the Annex V.

(b) Variety description databases

32. The TWV considered document TWP/6/2.

33. The TWV noted the reports made at the TWPs in 2021 on databases containing morphological and/or molecular data.

34. The TWV noted the invitation for members of the Union to report to the TWPs on work concerning the development of databases containing morphological and/or molecular data.

35. The TWV received a presentation on “The source of variety descriptions in the Netherlands” from an expert from the Netherlands. A copy of the presentation is provided in document TWV/56/11. The TWV noted that variety descriptions from the Netherlands were made publicly available on the following website: <https://nederlandsrassenregister.nl/>.

36. The TWV noted that the following UPOV members also published variety descriptions and/or provided information on protected varieties at the following directions:

- Australian PBR database: http://pericles.ipaustralia.gov.au/pbr_db/
- Brazil: https://sistemas.agricultura.gov.br/snpc/cultivarweb/cultivares_protegidas.php
- Canada: <https://inspection.canada.ca/plant-varieties/plant-breeders-rights/varieties/eng/1300463863953/1300463978655>
- European Union: <https://online.plantvarieties.eu/publicSearch>
- France: <https://www.geves.fr/catalogue-france/>

37. The TWV noted that Argentina and Germany provided variety descriptions upon request.

38. The TWV agreed with the TWF, at its fifty-second session, that the Office of the Union should be invited to check whether the information on webpages with variety descriptions could be made available on the UPOV website.

(c) Exchange and use of software and equipment

39. The TWV considered document TWP/6/5.

Document UPOV/INF/16 “Exchangeable Software”

40. The TWV noted that the Council had adopted by correspondence, on September 21, 2021, document UPOV/INF/16/10 “Exchangeable Software”.

41. The TWV noted that the Office of the Union had issued on January 18, 2022, Circular E-22/002 inviting the designated persons of the members of the Union in the TC to provide or update information regarding the use of the software included in document UPOV/INF/16.

42. The TWV noted that information from China, Czech Republic, France, Poland and Uzbekistan had been received to update document UPOV/INF/16.

43. The TWV received a presentation on “A Statistical Analysis Software: DUSCEL3.5” from an expert from China. A copy of the presentation is provided in document TWV/56/12.

44. The TWV noted that the TWM, at its first session, would be invited to review the software proposed by China, Czech Republic, France, Poland and Uzbekistan and make a recommendation to the TC, at its fifty-eighth session, on whether to include the proposed software in document UPOV/INF/16.

Document UPOV/INF/22 “Software and Equipment Used by Members of the Union”

45. The TWV noted that the Council had adopted by correspondence, on September 21, 2021, document UPOV/INF/22/8 “Software and Equipment Used by Members of the Union”.

46. The TWV noted that the Office of the Union had issued on January 18, 2022, Circular E-22/002 inviting the designated persons of the members of the Union in the TC to provide or update information regarding the use of the software included in document UPOV/INF/22.

47. The TWV noted that information from the Czech Republic, Netherlands, Poland and Uzbekistan had been received to update document UPOV/INF/22.

48. The TWV noted that the TC, at its fifty-eighth session, would be invited to consider whether to include the proposed software or equipment in document UPOV/INF/22, or whether to request further guidance from other relevant bodies.

Availability of documents UPOV/INF/16 “Exchangeable Software” and UPOV/INF/22 “Software and Equipment Used by Members of the Union” in a searchable form

49. The TWV noted that the information in documents UPOV/INF/16 and UPOV/INF/22 was available in a searchable format on the UPOV website (see: https://www.upov.int/it_resources/en/).

(d) UPOV PRISMA

50. The TWV considered document TWP/6/3 and noted the developments concerning UPOV PRISMA.

Variety denominations

51. The TWV considered document TWP/6/6 and noted developments concerning the “Explanatory Notes on Variety Denominations under the UPOV Convention” (document UPOV/EXN/DEN/1), the possible development of a UPOV similarity search tool for variety denomination and the expansion of the content of the PLUTO database.

52. The TWV considered document TWV/56/4 and the changes proposed to variety denomination classes for *Brassica* and creation of new classes within *Allium* and *Prunus*, as presented by an expert from the Czech Republic.

53. The TWV considered the different species within the proposed classes for *Allium* and *Brassica* and agreed that further discussion was required. The TWV agreed that *Allium* species used as vegetable crops should be individually listed to create a separate denomination class from other species used as ornamental plants.

54. The TWV agreed to invite the experts from the Czech Republic and the Netherlands to develop a new proposal to amend the denomination classes for *Allium* and *Brassica*, to be presented to the TWV at its fifty-seventh session.

Molecular techniques

Developments in UPOV

55. The TWV considered document TWP/6/7.

Cooperation between international organizations

56. The TWV noted that the results of the survey on the use of molecular marker techniques had been made available on the webpage of the fifty-seventh session of the Technical Committee, as set out in document TWP/6/7, paragraph 28. The TWV noted that on February 1, 2022, the Office of the Union had issued Circular E-2/009 inviting members to continue the survey on the use of molecular marker techniques.

57. The TWV noted the draft joint document explaining the principal features of the systems of OECD, UPOV and ISTA, as set out in the Annex to document TWP/6/7.

58. The TWV noted the topics proposed by the TC for a future joint UPOV/OECD/ISTA workshop, as set out in document TWP/6/7, paragraph 35.

59. The TWV noted that on December 13, 2021, the Office of the Union had informed OECD and ISTA of the result of the survey, draft joint document and proposed topics for a future joint UPOV/OECD/ISTA workshop. Responses from OECD and ISTA, when available, would be reported to the Technical Working Parties and the Technical Committee.

Developments at the twentieth session of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular

60. The TWV noted the papers presented at the twentieth session of the BMT and the program of work for the first session of the TWM.

Confidentiality & ownership of molecular information

61. The TWV noted discussions held at the TWPs and the BMT, at their sessions in 2021, on “Confidentiality & Ownership of Molecular Information”

Review of document UPOV/INF/17 “Guidelines for DNA-Profiling: Molecular Marker Selection and Database Construction (‘BMT Guidelines’)”

62. The TWV noted that a revision of document UPOV/INF/17 “Guidelines for DNA-Profiling: Molecular Marker Selection and Database Construction (‘BMT Guidelines’)” had been adopted by the Council, in 2021.

Presentation on the use of molecular techniques in DUS examination

63. The TWV received a presentation on “International harmonization and validation of a SNP set for the management of tomato reference collection” by an expert from the Netherlands. A copy of the presentation is provided in document TWV/56/21.

64. The TWV discussed the process of authorization from breeders for using varieties in the project and noted the importance of the agreement established to regulate access to genetic information from varieties and confidentiality aspects.

Cooperation in examination

65. The TWV considered document TWP/6/9.

66. The TWV noted that members of the Union had the possibility to update information on a person(s) to be contacted for matters concerning international cooperation in DUS examination by:

(i) updating information when invited to provide information for document TC/[xx]/4 “List of genera and species for which authorities have practical experience in the examination of distinctness, uniformity and stability”; and/or

- (ii) notifying the Office of the Union by sending an e-mail to upov.mail@upov.int.

67. The TWV noted the development of a package of compatible IT tools to address the technical and related administrative concerns that prevent cooperation in DUS examination, as reported in document TWP/6/9, paragraphs 9 to 14.

68. The TWV noted the report from the Office of the Union that matters concerning the package of compatible IT tools would be addressed at meetings on the Development of an Electronic Application Form (EAF).

69. The TWV noted the presentation on e-PVP Asia made by the Office of the Union, as presented in document TWP/6/9.

70. The TWV noted that the development of a platform for UPOV member databases containing variety description information would depend on UPOV members indicating which databases they would wish to share.

71. The TWV noted that the use of machine translation technology would be considered within a review of UPOV's policy on translation.

72. The TWV noted that the CAJ, at its seventy-eighth session:

(i) had agreed to include possible "guidance to encourage members of the Union, on a voluntary basis, to take over DUS test reports when the applicants could not submit plant material due to phytosanitary or other related issues where acceptable to the members of the Union concerned" as part of the work to be agreed by the CAJ; and

(ii) had agreed measures to address policy or legal barriers that the TC had identified as preventing international cooperation in DUS examination, as set out in document TWP/6/9, paragraph 34.

73. The TWV noted that the impact of the proposed measures would be assessed on the basis of the number of cooperation agreements reported by members of the Union, as presented in document C/[xx]/INF/5 "Cooperation in examination".

Use of disease resistance characteristics

74. The TWV received a presentation on "Harmorescoll - Towards a harmonized collection of reference material for DUS resistance tests" by an expert from France. A copy of the presentation is provided in document TWV/56/6 Corr.

New issues arising for DUS examination

75. The TWV received the following presentations made by experts from the European Union, copies of which are provided in document TWV/56/14:

- "Characteristics with one single observation in multi-annual testing";
- "Acceptance of final reports based on variety descriptions with the same notes";
- "Issue of reporting of the absence of similar varieties mentioned under chapter 16 of variety descriptions".

Increasing participation in the work of the Technical Working Parties and the Technical Committee

76. The TWV considered document TWP/6/12.

Participation at TWP meetings by electronic means

77. The TWV noted the participation at the TWP sessions in 2021, as presented in document TWP/6/12, Annex I.

Measures for physical and virtual participation at TWP meetings

78. The TWV noted the measures agreed by the TC for physical and virtual participation at TWP meetings, as set out in document TWP/6/12, paragraphs 9 to 12.

79. The TWV noted that the Office of the Union would interview members and observers and report outcomes to the TC, at its fifty-eighth session, along with options for improving the support provided by UPOV for DUS examination.

Experiences with new types and species

80. The TWV noted that no experiences with new types and species had been reported.

Matters to be resolved concerning Test Guidelines put forward for adoption by the Technical Committee

Tomato Rootstocks (partial revision)

81. The TWV considered document TWV/56/8 presented by Ms. Cécile Marchenay (Netherlands), and agreed the following:

<p>#Char. 22, Ad. 22</p>	<p>to check whether to reduce the scale to 3 notes or to improve the explanation about scoring the characteristic using all notes on the scale of 5 notes. <i>Leading Expert: Scale 1 to 5 has been kept for the moment, including extra explanation about all notes.</i> TWV: <i>Char. 22 to read as follows:</i></p> <table border="1" data-bbox="379 1059 1102 1294"> <tr> <td>22.</td> <td>VG</td> <td colspan="2">Resistance to <i>Meloidogyne incognita</i> (Mi)</td> </tr> <tr> <td>(*)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(+)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>QN</td> <td>susceptible</td> <td>Bruce</td> <td>1</td> </tr> <tr> <td></td> <td>intermediate resistant</td> <td></td> <td>2</td> </tr> <tr> <td></td> <td>highly resistant</td> <td>Emperador</td> <td>3</td> </tr> </table> <p><i>Ad. 22, 4. reference to INIA to read "INIA – CSIC"</i> <i>Ad. 22, 8.5 to read "deposit of piece of inoculated roots..."</i> <i>Ad. 22, 9.1 to add "It is recommended to include in the test, 10 non-inoculated plants, to be able to identified a possible lack of germination or a delay in plant growth, due to the material."</i> <i>Ad. 22, 10.2 to read "The aggressiveness of the test depends on the quantity of inoculum and the growing conditions (e.g. between 30g to 60g of inoculated roots "</i> <i>Ad. 22, 10.4 to read "Seeds are sown in non-inoculated soil and inoculation of soil..."</i> <i>Ad. 22, 12. to read</i> <i>"[1] Susceptible: variety very similar to susceptible control</i> <i>[2] Intermediate resistant: variety very similar to intermediate resistant control</i> <i>[3] Highly resistant: variety very similar to highly resistant control</i> <i>If results are not clear, statistical analysis is advised.</i> <i>If significantly different from the controls, a retest is advised to check if the result is stable."</i></p>	22.	VG	Resistance to <i>Meloidogyne incognita</i> (Mi)		(*)				(+)				QN	susceptible	Bruce	1		intermediate resistant		2		highly resistant	Emperador	3
22.	VG	Resistance to <i>Meloidogyne incognita</i> (Mi)																							
(*)																									
(+)																									
QN	susceptible	Bruce	1																						
	intermediate resistant		2																						
	highly resistant	Emperador	3																						
<p>#Ad. 22, 9.1, 9.4, 11.3</p>	<p>to improve the explanation clarifying how would germination effect the scoring of the characteristic <i>Leading Expert: see Annex to this document</i> TWV: agreed</p>																								

Ad. 22, 9.1	to read "... due to nematode or not " <i>Leading expert: see Annex to this document (covered by comment above)</i> <i>TWV: agreed</i>
Ad. 22, 9.2	to read "at least 2, preferably 3 to allow statistical analysis " <i>Leading Expert: prefer to keep "to allow statistical analysis"</i> <i>TWV: agreed</i>
Ad. 22, 9.6	to read "20-26°C, the temperature may <u>should</u> be ..." <i>Leading Expert: agreed</i> <i>TWV: agreed</i>
Ad. 22, 10.2	to read " the ratio is depending of <u>Quantity of inoculum depends on</u> aggressiveness of test and lab's growing conditions (e.g. between 30 g to 60 g of infested roots, for 100 plants in a tray of 45*30 cm containing approximately 5.5 kg of substrate);, galls should be homogeneously mixed with soil." <i>Leading Expert: agreed</i> <i>TWV: agreed</i>
Ad. 22, 10.4	to read " plants seed sown in soil contaminated with galls." <i>Leading Expert: agreed</i> <i>TWV: agreed</i>
Ad. 22, 11.4	to be deleted <i>Leading Expert: agreed</i> <i>TWV: agreed</i>
Ad. 22, 12.	in the figure, blue text: "Tyonoc" should read "Tyonic" <i>Leading Expert: figure removed, not applicable</i> <i>TWV: agreed</i>
Ad. 24, 12.	- to add the following wording: "Absent [1] distribution of plants in the classes comparable with the susceptible controls. "Present [9] distribution of plants in the classes comparable with the resistant controls." <i>Leading Expert: agreed</i> <i>TWV: agreed</i>

Discussions on draft Test Guidelines

Full draft Test Guidelines

Chinese cabbage (*Brassica rapa* L. subsp. *pekinensis* (Lour.) Kitam., hybrids between *B. rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *B. rapa* L. Emend. Metzg. ssp. *chinensis* (L.) Hanelt, hybrids between *B. rapa* L. Emend. Metzg. ssp. *pekinensis* (Lour.) Hanelt and *B. rapa* L. var. *rapa* (L.) Thell., *B. xturicensis* O. E. Schulz & Thell.) (Revision)

82. The subgroup discussed document TG/105/5(proj.2), presented by Mr. Chan Woong Park (Republic of Korea), and agreed the following:

Table of Chars.	- to add new characteristic after Char. 34 to read "Male sterility" (QL; MS/VG; (1) absent: "Emiko, Kasumi", (9) present "Hanko, Red Dragon" - to use same explanation as in the Test Guideline of e.g. Kale. The characteristic should not be compulsory (not to be indicated with asterisk)
Char. 5	state 3 to read "medium obovate"
Char. 6	to read "Outer leaf: shape of apex"
Char. 9	to have states (1) green with example varieties "Daetong, Hayamidori, Kaho, Muso, EX King santosai, Parkin, Sprinkin" and (2) purple with example varieties "Jinhongssam, Kwonnongppalgang, Red Dragon" - to be indicated as QL
Char. 10	to check whether to use example varieties from Char. 9 in Char. 10
Char. 15	to check whether to add example variety for state 3
Char. 16	to read "Outer leaf: dentation of margin"
Char. 19	to have states (1) flat, (2) flat to concave, (3) concave
Char. 21	to add example varieties "Jinlv60, Jincai3" for state 2
Char. 25	- to check whether to replace the scale 1-5 by (1)open, (2) half-open, (3) closed - to check whether to read "Head: degree of closing of leaves"
Char. 26	to add the example variety for "Xinxiashuai" for state 1

Ad. 5	- to check whether state 5 to be renamed (high ratio of same obovate shape) - to check whether to be presented in a grid
Ad. 13	to delete illustrations
Ad. 20	to add explanation to clarify on which leaf (part of the plant) and which part of the leaf to be assessed
Ad. 21	- to add explanation: to be observed on inner side of leaf - color photographs to be deleted
Ad. 24	to check whether to present illustrations in a grid
Ad. 28	- to delete photographs - to add explanation to read "observations should be made on upper part in longitudinal section"

Egg plant (*Solanum melongena* L.) (Revision)

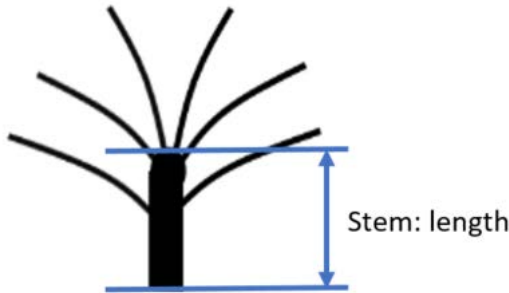

83. The subgroup discussed document TG/117/5(proj.3), presented by Ms. Céline Morineau (European Union), and agreed the following:

Cover page	to delete synonym " <i>Solanum ovigerum</i> Dunal"
2.3	to check whether to delete indication of requirement for grams of seeds
4.1.4	to delete second paragraph
4.2.3	- to check whether to indicate which characteristics or types of varieties are assessed with which method (same approach as in TGs Pepper and Tomato) - to check whether to delete the paragraph covering cross pollinated varieties
4.2.4	- to delete first sentence - second sentence to read "For the assessment of uniformity of self-pollinated and hybrid varieties,..."
Char. 8	to have states from "absent to very shallow" to "very deep"
Char. 12	- to check whether to be indicated as QN with three states - to check whether to replace with "type of fructification" - if kept QL, to check whether to add explanation (e.g. that 1 to max 3 flowers (= not a truss) so would be noted "absent" and more than 3 flowers would be noted "present".)
Char. 14	to check whether to add example variety "Masumi" for state 1
Char. 15	to delete example variety "Hakatanaga"
Char. 16	to check whether "White egg" is a synonym for "Blanche ronde à oeuf"; if so, replace "White egg"
Char. 18	to delete example variety "Volta"
Char. 24	- to read "or" instead of "and" in the title - to check if "Circe" is a suitable example variety for note 1 - to add example varieties (mostly for green skin color varieties) and indication which color they are (to add the legend in the explanation) - to check whether to read " <u>Excluding varieties with white skin color</u> : Fruit: intensity of main color of skin"
Chars. 26 to 29	to check whether to review approach (use pattern and/or distribution?, use main, secondary, tertiary approach?)

*Kale (*Brassica oleracea* L. var. *costata* DC.; *B. oleracea* L. var. *medullosa* Thell.; *B. oleracea* L. var. *sabellica* L.; *B. oleracea* L. var. *viridis* L.; *B. oleracea* L. var. *palmifolia* DC.) (Revision)

84. The subgroup discussed document TG/90/7(proj.4), presented by Mr. Takayuki Nishikawa (Japan), and agreed the following:

Cover page	- name box and table with alternative names: put in alphabetical order - to check whether to complete French, German and Spanish common names
2.2	to read "The material is to be supplied in the form of seeds or young plants."
2.3	quantity of plant material for vegetatively propagated varieties to read "30 plants of normal transplantation size"
4.2.4	to be deleted
5.3 (d)	to be deleted
Char. 1	to delete example variety "Cottagers"

Char. 5	<p>- to delete example variety "Cottagers" - to add illustration and explanation "Observations should be made from ground level to the growing point."</p> 
Char. 10	to correct spelling of state 5 to read "very strong"
Char. 12	<p>- to add to TQ 5 - to add (*)</p>
Char. 13	to check whether to be deleted
Chars. 17, 18	to check whether to be combined or keep char. 17 and delete char. 18
Char. 19	to check whether to delete (*)
8.1(d)	to read "Characteristics which should be observed on fodder types only (<i>Brassica oleracea</i> L. var. <i>viridis</i> L., <i>Brassica oleracea</i> L. var. <i>medullosa</i> Thell.)"
Ad. 1	<p>to use improved illustration</p> 
Ad. 7	to delete illustrations and add explanation "Should be assessed as number of branching nodes along the main stem. Observations should be made after bolting but before flowering."

*Pepper (*Capsicum annuum* L.) (Revision)

85. The subgroup discussed document TG/76/9(proj.4), presented by Ms. Marian van Leeuwen (Netherlands), and agreed the following:

2.3 (b)	to read "vegetatively propagated varieties: 25 non grafted young plants not yet bearing flowers and fruits,..."
3.4.3	to read "When resistance characteristics are used for assessing distinctness, uniformity and stability of seed-propagated varieties, records must be taken under conditions of controlled infection and, unless otherwise specified, on at least 20 plants.
4.2.3	to be deleted
5.3	to delete "An explanation on vegetable, rootstock and ornamental types of varieties is given in chapter 8.3."
Char. 12	<p>- to read "Leaf blade: ratio length/width" - to have the following states (1) low with example variety "Solario" (2) medium with example varieties "Balico, Sonar" (3) high with example varieties "Brutus, De Cayenne"</p>

Chars. 14 to 16	- to delete "Only for ornamental varieties:" - to delete (*) and remove from grouping chars. - add new explanation in 8.1 to read "Observations should be made on fully developed leaves from the middle third of the plant."
Char. 15	to be indicated as PQ
Char. 21	to delete "predominantly" from states of expression
Char. 22	to add explanation "Observations should be made at the middle third of the plant on fresh fully open flowers."
Char. 27	to add explanation "For greenish white and greenish yellow varieties, observations should be made before start of the color change."
Ad. 12	to keep only illustration of state 2 and add indication of length and width
Ad. 21	to add explanation "Observations should be made at the middle third of the plant. The predominant state of expression should be scored on fresh fully open flowers."
Ad. 23	to read "Observations should be made on the part of the stamen that produces pollen, i.e. the anther, on flowers of the middle third of the stem."
Ad. 24	Observations should be made on the stalk of the stamen, i.e. the filament, on flowers of the middle third of the stem.
Ad. 25	- first sentence to read "Observations should be made on anthers of fresh fully open flowers. Male sterile flowers do not have pollen." - last paragraph to read: <u>"Selfing and maintenance of the variety (parent line)</u> gg (gms, male sterile) x GG (normal germplasm, male fertile) results in Gg. After <u>selfing</u> the offspring will be 50% Gg, 25% gg and 25% GG. For a higher rate of steriles and <u>the maintenance of the line</u> the cross gg x Gg is made. This results in 50% sterile and 50% fertile."
9.	to check whether to add literature on male sterility

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

86. The subgroup discussed document TG/44/12(proj.2), presented by Ms. Cécile Marchenay (Netherlands), and agreed the following:

Cover page	"Other associated UPOV documents:" to read TG/294/1
3.3.2	to be deleted
3.4.3	to invert order of paragraphs
Table of chars.	to delete the space in the denomination of the example variety "Saint-Pierre" (all occurrences)
Char. 6	to have states from "very short" to "very tall" (height)
Char. 17	to be indicated as PQ (see "multiflora")
Chars. 21 to 26	to read "Immature fruit:..." and delete "(before maturity)"
Char. 26	to add to TQ 5
Char. 31	to delete "at peduncle end" (move information to Ad. 31)
Chars. 40, 41	to read "Mature fruit:..." and delete "(at maturity)"
Char. 45	- to be indicated as MS/VS - to have states (1) susceptible, (2) intermediate resistant, (3) highly resistant
Char. 57	to delete (*)
Char. 61	to delete "/2026"
Char. 66	to delete (*)
Char. 68	to delete "/2026"
8.1 (b)	Observations should be made on fully developed immature fruits.
8.2	disease resistance characteristics: to apply same changes as agreed for Tomato Rootstocks (document TWV/56/8)
Ad. 1	to be deleted (illustration for color not suitable)
Ad. 4	to delete first paragraph
Ad. 16	The date of flowering is reached when 50 % of plants have the third flower on the second truss open
Ad. 17	to add notes to the illustrations as follows: (1) uniparous, (3) multiparous (biparous), (3), multiparous (triparous), (4) multiflora
Ad. 20	to read "Observations should be made from the base until the abscission layer on harvested fruits."

Ad. 26	to be deleted (illustration for color not suitable)
Ad. 30	to check whether to be improved or split in several characteristics
Ad. 31	to read "Observations should be made at peduncle end after removal the peduncle and calyx. Each rib is between two grooves."
Ad. 40	to delete illustrations (illustration for color not suitable)
Ad. 41	to delete illustrations (illustration for color not suitable)
Ad. 45, 4.	to up date the name of INIA
Ad. 45, 9.3	to have "Arletta, Anahu, Anahu x Casaque Rouge"
Ad. 47, 4.	to update the name of INIA
Ad. 57, 4.	to update the name of INIA
TQ 5.2	to add option "not applicable (for determinate growth type)"
TQ 5.21, 5.22	to add option "not tested"

Partial revisions

*Garden Rocket (*Eruca sativa* Mill.)

87. The subgroup discussed document TWV/56/9, presented by Ms. Marian van Leeuwen (Netherlands), and agreed the following:

Char. 11	to add example variety "Sweet Intensity" for state 7
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*Garlic (*Allium sativum* L.)

88. The subgroup discussed document TWV/56/5, presented by Ms. Marian van Leeuwen (Netherlands), and agreed with the proposed changes.

*Kohlrabi (*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *gongylodes* L.; *Brassica oleracea* L. *Gongylodes* Group)

89. The subgroup discussed document TWV/56/19, presented by Ms. Gosia Blokker (Netherlands), and agreed with the proposed changes.

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

90. The subgroup discussed document TWV/56/16, presented by Mr. Dominique Rousseau (France), and agreed the following:

Char. 9	to have example variety "Variegata di Chioggia" and note 3 for state "diffused and in patches"
Char. 10	to delete "on the whole of the leaf (including midrib)"

*Melon (*Cucumis melo* L.)

91. The TWV agreed to postpone discussions on the partial revisions of the Test Guidelines for Melon and Squash until its fifty-seventh session.

*Pea (*Pisum sativum* L.)

92. The subgroup discussed document TWV/56/17, presented by Ms. Chrystelle Jouy (France), and agreed the following:

General	to replace "aggressivity" with "aggressiveness"
Char. 58	- to add "Race 1" to the title of the characteristic - to add example varieties "Astronaute" (resistant) and "Curling, Aviron" (susceptible)
Ad. 58, 6.	text below table to read "Courtesy of International Seed Federation"
Ad. 58, 10.3	to read "...by filtering solution through muslin cloth. For liquid medium, filter through muslin cloth to remove large hyphal fragments."

Ad. 58, 11.2	to delete last paragraph (“General remark: ...”)
Char. 59	to add example varieties “LG Amigo, Boogie” (resistant) and “Astronaute, Aviron, Dexter” (susceptible)
Ad. 59, 9.4	to read “...to place them exactly in the same conditions (due to risk of contamination)”
Ad. 59, 9.6	to delete last paragraph (“In some conditions...”)
Ad. 60, 6.	text below table to read “Courtesy of International Seed Federation”
Ad. 60, 10.1	to read “...through muslin cloth.”

*Spinach (*Spinacia oleracea* L.)

93. The subgroup discussed document TWV/56/7, presented by Ms. Marian van Leeuwen (Netherlands), and agreed the following:

Char. 18	all races to read “Race Pe (ex Pfs):...”
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*Vegetable Marrow, Squash (*Cucurbita pepo* L.)

94. The TWV agreed to postpone discussions on the partial revisions of the Test Guidelines for Melon and Squash until its fifty-seventh session.

*Wild Rocket (*Diplotaxis tenuifolia* (L.) DC.)

95. The subgroup discussed document TWV/56/10, presented by Ms. Marian van Leeuwen (Netherlands), and agreed the following:

Char. 8	to delete example variety “Gourmet” from state 3
Char. 9	to add example variety “Brevi” to state 3

Recommendations on draft Test Guidelines

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

96. The TWV agreed that the following draft Test Guidelines should be submitted to the TC for adoption at its fifty-eighth session, to be held in Geneva on October 24 and 25, 2022, on the basis of the following documents and the comments in this report:

Partial revisions

<u>Subject</u>	<u>Basic Document(s) (2022)</u>
*Garden Rocket (<i>Eruca sativa</i> Mill.) (Partial revision: Update on example varieties for several characteristics)	TG/245/1, TWV/56/9
*Garlic (<i>Allium sativum</i> L.) (Partial revision: addition of plant material: seed and uniformity requirements)	TG/162/4, TWV/56/5
*Kohlrabi (<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.) Alef. var. <i>gongylodes</i> L. (<i>Brassica oleracea</i> L. <i>Gongylodes</i> Group)) (Partial revision: (i) Deletion of Char./Ad. 11 “Leaf blade: divisions to midrib (on lower part of leaf)”; (ii) Revision of Char./Ad. 20 “Kohlrabi: color of skin”)	TG/65/4 Rev., TWV/56/19

*Leaf Chicory (<i>Cichorium intybus</i> L. var. <i>foliosum</i> Hegi) (Partial revision: (i) Char. 8 “Leaf color” (ii) Char. 11 “Leaf: profile of upper side” (iii) Char. 25 “Head: color of cover leaves” (iv) Addition of new Char. “ <u>Only varieties with anthocyanin coloration: present</u> Leaf: area covered by anthocyanin coloration” (v) Addition of new Char. “Leaf: profile of margin of apical part”	TG/154/4, TWV/56/16
*Pea (<i>Pisum sativum</i> L.) (Partial revision: Char. 58 “Resistance to Fop”, Char. 59 “Resistance to <i>E. pisi</i> ”, Char. 60 “Resistance to <i>A. pisi</i> ”)	TG/7/10 Rev. 2, TWV/56/17
*Spinach (<i>Spinacia oleracea</i> L.) (Partial revision: Char./Ad. 18 “Resistance to <i>Peronospora farinosa</i> f. sp. <i>spinaciae</i> ”)	TG/55/7 Rev. 6, TWV/56/7
*Tomato rootstock (Partial revision: coverage: to remove <i>S. cheesmaniae</i> , Chars. and Ads. 22 “Resistance to Mi”, 23 “Resistance to Va and Vd”, 24 “Resistance to Fol”, 26 “Resistance to Ff”)	TG/294/1 Corr. Rev. 3, TWV/56/8
*Wild Rocket (<i>Diplotaxis tenuifolia</i> (L.) DC.) (Partial revision: Update on example varieties for several characteristics)	TG/244/1, TWV/56/10

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

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

Full draft Test Guidelines

<u>Subject</u>	<u>Basic Document(s) (2022)</u>
*Chinese cabbage (<i>Brassica rapa</i> L. subsp. <i>pekinensis</i> (Lour.) Kitam., hybrids between <i>B. rapa</i> L. Emend. Metzg. ssp. <i>pekinensis</i> (Lour.) Hanelt and <i>B. rapa</i> L. Emend. Metzg. ssp. <i>chinensis</i> (L.) Hanelt, hybrids between <i>B. rapa</i> L. Emend. Metzg. ssp. <i>pekinensis</i> (Lour.) Hanelt and <i>B. rapa</i> L. var. <i>rapa</i> (L.) Thell., <i>Brassica xturicensis</i> O. E. Schulz & Thell.) (Revision)	TG/105/5(proj.2)
*Egg plant (<i>Solanum melongena</i> L.) (Revision)	TG/117/5(proj.3)
*Kale (<i>Brassica oleracea</i> L. var. <i>costata</i> DC.; <i>B. oleracea</i> L. var. <i>medullosa</i> Thell.; <i>B. oleracea</i> L. var. <i>sabellica</i> L.; <i>B. oleracea</i> L. var. <i>viridis</i> L.; <i>B. oleracea</i> L. var. <i>palmifolia</i> DC.) (Revision)	TG/90/7(proj.4)
Parsley (<i>Petroselinum crispum</i> (Mill.) Nyman ex A.W. Hill)	TG/136/5
*Pepper (<i>Capsicum annuum</i> L.) (Revision)	TG/76/9(proj.4)
*Tomato (<i>Solanum lycopersicum</i> L.) (Revision)	TG/44/12(proj.2)

Partial revisions

<u>Subject</u>	<u>Basic Document(s) (2022)</u>
*Brussels Sprouts (<i>Brassica oleracea</i> L. var. <i>gemmifera</i> DC.) (Partial revision: - to change explanation on CMS marker - to add new resistance clubroot)	TG/54/7 Rev.
*Cabbage (<i>Brassica oleracea</i> L.: <i>Brassica</i> (White Cabbage Group); <i>Brassica</i> (Savoy Cabbage Group); <i>Brassica</i> (Red Cabbage Group)) (Partial revision: - to change explanation on CMS marker - to add new resistance clubroot)	TG/48/7 Rev.

*Cauliflower (<i>Brassica oleracea</i> L. convar <i>botrytis</i> (L.) Alef. var. <i>botrytis</i> L.) (Partial revision: - to change explanation on CMS marker - to add new resistance clubroot - to add possibility to observed with the marker for flower color)	TG/45/7 Rev.
*Cornsalad (<i>Valerianella locusta</i> L.; <i>Valerianella eriocarpa</i> Desv.) (Partial revision: Char. "Leaf: length")	TG/75/7
*Industrial Chicory (<i>Cichorium intybus</i> L. partim) (Partial revision: Ploidy)	TG/172/4
*Kohlrabi (<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.) Alef. var. <i>gongylodes</i> L. (<i>Brassica oleracea</i> L. <i>Gongylodes</i> Group)) (Partial revision: - to change explanation on CMS marker - to add new resistance clubroot)	TG/65/4 Rev.
*Lettuce (<i>Lactuca sativa</i> L.) (Partial revision: to add race 4 to Fol; to add new isolate 36 to Bl; to delete several *)	TG/13/11 Rev. 2
*Melon (<i>Cucumis melo</i> L.) (Partial revision: Char. 69 "Resistance to Fom", Char. 70 "Resistance to Px")	TG/104/5 Rev. 2, TWV/56/18
*Pea (<i>Pisum sativum</i> L.) (Partial revision: addition of resistance to <i>Peronospora viciae</i> (Pv) (downey mildew))	TG/7/10 Rev. 2
*Radish; Black Radish (<i>Raphanus sativus</i> L. var <i>sativus</i> ; <i>Raphanus sativus</i> L. var. <i>niger</i> (Mill.) S. Kerner) (Partial revision: Ploidy)	TG/63/7-TG/64/7 Rev. Corr.
*Spinach (<i>Spinacia oleracea</i> L.) (Partial revision: Char. 17 "Seed: spines (harvested seed)")	TG/55/7 Rev. 6
*Swede, Rutabaga (<i>Brassica napus</i> L. var. <i>napobrassica</i> (L.) Rchb.) (Partial revision: to add CMS marker characteristic)	TG/89/6 Rev.
*Vegetable Marrow, Squash (<i>Cucurbita pepo</i> L.) (Partial revision: to add new Characteristics "Resistance to ZYMV" and "Resistance to Watermelon mosaic virus")	TG/119/4 Corr. 2, TWV/56/20
*Watermelon (<i>Citrullus lanatus</i> (Thunb.) Matsum. et Naka) (Partial revision: Ploidy)	TG/142/5 Rev.

98. The leading experts, interested experts and timetables for the development of the Test Guidelines are set out in Annex II to this report.

(c) *Draft Test Guidelines for possible future discussion*

99. The TWV agreed on the following draft Test Guidelines for discussion at a future session:

<u>Subject</u>	<u>Basic Document(s)</u>
Water spinach (<i>Ipomoea aquatica</i>)	NEW
Garlic (<i>Allium sativum</i> L.) (Revision)	TG/162/4

Revisions of Test Guidelines

100. The TWV considered document TWP/6/10.

Relationship between Asterisked, Grouping and TQ characteristics

101. The TWV noted that no proposals had been received to revise document TGP/7 "Development of Test Guidelines" to clarify the relationship between asterisks in the Test Guidelines and characteristics in the technical questionnaires.

Proposals for partial revisions of Test Guidelines

102. The TWV considered the proposals for partial revisions of the Test Guidelines for Maize, Lettuce, Carrot, Spinach, Cucumber, Melon, Squash, Watermelon and Tomato Rootstocks, as set out in document TWP/6/10, paragraph 25 and Annexes I to IX.

103. The TWV noted that further comments had been received on the proposals and that it would not be possible to reach a conclusion during the session. The TWV agreed to continue discussions at its fifty-seventh session and invited Ms. Bronislava Bátorová (European Union) to present a new proposal for the Technical Questionnaire for maize to clarify the wording of states “not applicable” on the reasons for exclusion from observation.

Guidance for drafters of Test Guidelines

104. The TWV considered document TWP/6/8.

105. The TWV noted that the web-based TG template and database of approved characteristics was currently being migrated to cloud servers, including an upgrade to new technologies in infrastructure and program to address issues reported by users and enabling use for drafting individual authorities’ test guidelines.

106. The TWV noted that interviews would be conducted in 2022 to collect requirements for the development of individual authorities’ test guidelines using the web-based TG template.

107. The TWV noted that training on the web-based TG template could be organized upon request.

Chairperson

108. The TWV agreed to propose to the TC that it recommend to the Council to elect Mr. Yoshiyuki Ohno (Japan) as the next chairperson of the TWV.

Date and place of the next session

109. At the invitation of Turkey, the TWV agreed to hold its fifty-seventh session in Antalya, Turkey, from May 1 to 5, 2023.

Future program

110. The TWV agreed that in order to allow sufficient time in advance of the meeting to post the documents and provide comments, all documents and presentations invited or to be prepared should be sent to the Office of the Union by March 3, 2023.

111. 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
 - (b) Reports on developments within UPOV (report by the Office of the Union)
4. Molecular Techniques
 - (a) Developments in UPOV (document to be prepared by the Office of the Union)
 - (b) Presentation on the use of molecular techniques in DUS examination (presentations invited)
5. Development of guidance and information materials (documents to be prepared by the Office of the Union)
6. Possible use of COYU Splines for vegetable crops (document and presentation to be prepared by the United Kingdom)
7. Variety denominations (document to be prepared by the Office of the Union)

8. Replacing botanical nomenclature by variety groups (document to be prepared by the Netherlands)
9. 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 presentations invited)
 - (c) Exchange and use of software and equipment (document to be prepared by the Office of the Union)
 - (d) UPOV PRISMA (document to be prepared by the Office of the Union)
10. Image analysis of vegetable crops (document to be prepared by China and documents invited)
11. Experiences with new types and species (oral reports invited)
12. New issues arising for DUS examination (presentations invited)
13. Revision of Test guidelines (document to be prepared by the Office of the Union, and documents invited)
14. Assessing distinctness in disease resistance characteristics and correlation among scales of notes (document to be prepared by France and Netherlands and documents invited)
15. Use of disease resistance characteristics (presentations invited from France and presentations invited)
16. Matters to be resolved concerning Test Guidelines put forward for adoption by the Technical Committee (if appropriate)
17. Discussions on draft Test Guidelines (Subgroups)
18. Recommendations on draft Test Guidelines
19. Guidance for drafters of Test Guidelines
20. Date and place of the next session
21. Future program
22. Report on the session (if time permits)
23. Closing of the session

112. The TWV adopted this report at the close of its session.

[Annex I follows]

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[Annex II follows]

LIST OF LEADING EXPERTS

**DRAFT TEST GUIDELINES TO BE SUBMITTED
TO THE TECHNICAL COMMITTEE IN 2022**

All requested information to be submitted to the Office of the Union

before June 4, 2022Partial revisions

Species	Basic Document	Leading Expert(s)
*Garden Rocket (<i>Eruca sativa</i> Mill.) (Partial revision: Update on example varieties for several characteristics)	TG/245/1, TWV/56/9	Ms. Marian van Leeuwen (NL)
*Garlic (<i>Allium sativum</i> L.) (Partial revision: addition of plant material: seed and uniformity requirements)	TG/162/4, TWV/56/5	Ms. Marian van Leeuwen (NL)
*Kohlrabi (<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.) Aef. var. <i>gongylodes</i> L. (<i>Brassica oleracea</i> L. <i>Gongylodes</i> Group)) (Partial revision: (i) Deletion of Char./Ad. 11 "Leaf blade: divisions to midrib (on lower part of leaf)"; (ii) Revision of Char./Ad. 20 "Kohlrabi: color of skin")	TG/65/4 Rev., TWV/56/19	Ms. Gosia Blokker (NL)
*Leaf Chicory (<i>Cichorium intybus</i> L. var. <i>foliosum</i> Hegi) (Partial revision: (i) Char. 8 "Leaf color" (ii) Char. 11 "Leaf: profile of upper side" (iii) Char. 25 "Head: color of cover leaves" (iv) Addition of new Char. " <u>Only varieties with anthocyanin coloration: present</u> Leaf: area covered by anthocyanin coloration" (v) Addition of new Char. "Leaf: profile of margin of apical part"	TG/154/4, TWV/56/16	Mr. Dominique Rousseau (FR)
*Pea (<i>Pisum sativum</i> L.) (Partial revision: Char. 58 "Resistance to Fop", Char. 59 "Resistance to <i>E. pis</i> ", Char. 60 "Resistance to <i>A. pis</i> ")	TG/7/10 Rev. 2, TWV/56/17	Ms. Chrystelle Jouy (FR)
*Spinach (<i>Spinacia oleracea</i> L.) (Partial revision: Char./Ad. 18 "Resistance to <i>Peronospora farinosa</i> f. sp. <i>spinaciae</i> ")	TG/55/7 Rev. 6, TWV/56/7	Ms. Marian van Leeuwen (NL)
*Tomato rootstock (Partial revision: coverage: to remove <i>S. cheesmaniae</i> , Chars. and Ads. 22 "Resistance to Mi", 23 "Resistance to Va and Vd", 24 "Resistance to Fol", 26 "Resistance to Ff")	TG/294/1 Corr. Rev. 3, TWV/56/8	Ms. Cécile Marchenay (NL)
*Wild Rocket (<i>Diplotaxis tenuifolia</i> (L.) DC.) (Partial revision: Update on example varieties for several characteristics)	TG/244/1, TWV/56/10	Ms. Marian van Leeuwen (NL)

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWV/57
(* indicates possible final draft Test Guidelines)

**(Guideline date for Subgroup draft to be circulated by Leading Expert: January 20, 2023
Guideline date for comments to Leading Expert by Subgroup: February 17, 2023)**

New draft to be submitted to the Office of the Union
by March 17, 2023

Full draft Test Guidelines

Species	Basic Document	Leading Expert(s)	Interested Experts (State / Organization) ¹
*Chinese cabbage (<i>Brassica rapa</i> L. subsp. <i>pekinensis</i> (Lour.) Kitam., hybrids between <i>B. rapa</i> L. Emend. Metzg. ssp. <i>pekinensis</i> (Lour.) Hanelt and <i>B. rapa</i> L. Emend. Metzg. ssp. <i>chinensis</i> (L.) Hanelt, hybrids between <i>B. rapa</i> L. Emend. Metzg. ssp. <i>pekinensis</i> (Lour.) Hanelt and <i>B. rapa</i> L. var. <i>rapa</i> (L.) Thell., <i>Brassica xturicensis</i> O. E. Schulz & Thell.) (Revision)	TG/105/5(proj.2)	Mr. Chan Woong Park (KR)	CN, CZ, DE, ES, FR, JP, NL, PL, QZ, CLI, Euroseeds, ISF, Office
*Egg plant (<i>Solanum melongena</i> L.) (Revision)	TG/117/5(proj.3)	Ms. Céline Morineau (QZ)	AU, BR, CN, DE, ES, FR, HU, IT, JP, KE, KR, NL, SK, TR, CLI, Euroseeds, ISF, Office
*Kale (<i>Brassica oleracea</i> L. var. <i>costata</i> DC.; <i>B. oleracea</i> L. var. <i>medullosa</i> Thell.; <i>B. oleracea</i> L. var. <i>sabellica</i> L.; <i>B. oleracea</i> L. var. <i>viridis</i> L.; <i>B. oleracea</i> L. var. <i>palmifolia</i> DC.) (Revision)	TG/90/7(proj.4)	Mr. Toshiya Kobayashi (JP)	AU, CN, DE, ES, FR, GB, IT, JP, KE, KR, NL, QZ, CLI, Euroseeds, ISF, Office
Parsley (<i>Petroselinum crispum</i> (Mill.) Nyman ex A.W. Hill)	TG/136/5	Ms. Swenja Tams (DE)	CN, ES, FR, IT, JP, NL, QZ, TR, Euroseeds, ISF, Office
*Pepper (<i>Capsicum annuum</i> L.) (Revision)	TG/76/9(proj.4)	Ms. Marian van Leeuwen (NL)	AU, BG, BR, CA, CN, CZ, DE, ES, FR, HU, IT, JP, KE, KR, NL, PL, QZ, SK, TR, US, CLI, Euroseeds, ISF, Office
*Tomato (<i>Solanum lycopersicum</i> L.) (Revision)	TG/44/12(proj.2)	Ms. Cécile Marchenay (NL)	AU, BG, BR, CA, CN, CZ, ES, FR, HU, IS, IT, KE, JP, PL, KR, NL, QZ, RO, RU, SK, TR, US, CLI, Euroseeds, ISF, Office

¹ for name of experts, see list of participants

Partial revisions

Species	Basic Document	Leading Expert(s)	Interested Experts (State / Organization) ²
*Brussels Sprouts (<i>Brassica oleracea</i> L. var. <i>gemmifera</i> DC.) (Partial revision: - to change explanation on CMS marker - to add new resistance clubroot)	TG/54/7 Rev.	Ms. Gosia Blokker (NL)	FR, GB, NL, QZ, CLI, Euroseeds, ISF, Office
*Cabbage (<i>Brassica oleracea</i> L.: <i>Brassica</i> (White Cabbage Group); <i>Brassica</i> (Savoy Cabbage Group); <i>Brassica</i> (Red Cabbage Group)) (Partial revision: - to change explanation on CMS marker - to add new resistance clubroot)	TG/48/7 Rev.	Ms. Gosia Blokker (NL)	CN, DE, ES, FR, NL, QZ, RU, CLI, Euroseeds, ISF, Office
*Cauliflower (<i>Brassica oleracea</i> L. convar <i>botrytis</i> (L.) Alef. var. <i>botrytis</i> L.) (Partial revision: - to change explanation on CMS marker - to add new resistance clubroot - to add possibility to observed with the marker for flower color)	TG/45/7 Rev.	Ms. Gosia Blokker (NL)	CN, DE, ES, FR, NL, QZ, CLI, Euroseeds, ISF, Office
*Cornsalad (<i>Valerianella locusta</i> L.; <i>Valerianella eriocarpa</i> Desv.) (Partial revision: Char. "Leaf: length")	TG/75/7	Ms. Cécile Marchenay (NL)	DE, NL, FR, QZ, CLI, Euroseeds, ISF, Office
*Industrial Chicory (<i>Cichorium intybus</i> L. partim) (Partial revision: Ploidy)	TG/172/4	Ms. Gosia Blokker (NL)	CA, NL, FR, QZ, Euroseeds, ISF, Office
*Kohlrabi (<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.) Alef. var. <i>gongylodes</i> L. (<i>Brassica oleracea</i> L. <i>Gongylodes</i> Group)) (Partial revision: - to change explanation on CMS marker - to add new resistance clubroot)	TG/65/4 Rev.	Ms. Gosia Blokker (NL)	DE, NL, FR, QZ, CLI, Euroseeds, ISF, Office
*Lettuce (<i>Lactuca sativa</i> L.) (Partial revision: to add race 4 to Fol; to add new isolate 36 to Bl; to delete several *)	TG/13/11 Rev. 2	Ms. Amanda van Dijk (NL)	AU, CA, ES, NL, FR, QZ, CLI, Euroseeds, ISF, Office
*Melon (<i>Cucumis melo</i> L.) (Partial revision: Char. 69 "Resistance to Fom", Char. 70 "Resistance to Px")	TG/104/5 Rev. 2, TWV/56/18	Ms. Chrystelle Jouy (FR)	BR, ES, FR, IT, JP, KE, KR, NL, QZ, SK, CLI, Euroseeds, ISF, Office
*Pea (<i>Pisum sativum</i> L.) (Partial revision: addition of resistance to <i>Peronospora viciae</i> (Pv) (downey mildew))	TG/7/10 Rev. 2	Ms. Cécile Marchenay (NL)	CA, DE, ES, FR, GB, NL, QZ, CLI, Euroseeds, ISF, Office
*Radish; Black Radish (<i>Raphanus sativus</i> L. var. <i>sativus</i> ; <i>Raphanus sativus</i> L. var. <i>niger</i> (Mill.) S. Kerner) (Partial revision: Ploidy)	TG/63/7-TG/64/7 Rev. Corr.	Mr. Dominique Rousseau (FR)	AU, CA, DE, ES, FR, GB, NL, QZ, CLI, Euroseeds, ISF, Office
*Spinach (<i>Spinacia oleracea</i> L.) (Partial revision: Char. 17 "Seed: spines (harvested seed)")	TG/55/7 Rev. 6	Ms. Marian van Leeuwen (NL)	ES, FR, NL, QZ, CLI, Euroseeds, ISF, Office
*Swede, Rutabaga (<i>Brassica napus</i> L. var. <i>napobrassica</i> (L.) Rchb.) (Partial revision: to add CMS marker characteristic)	TG/89/6 Rev.	Ms. Gosia Blokker (NL)	CA, ES, GB, FR, NL, QZ, Euroseeds, ISF, Office

² for name of experts, see list of participants

Species	Basic Document	Leading Expert(s)	Interested Experts (State / Organization) ²
*Vegetable Marrow, Squash (<i>Cucurbita pepo</i> L.) (Partial revision: to add new Characteristics "Resistance to ZYMV" and "Resistance to Watermelon mosaic virus")	TG/119/4 Corr. 2, TWV/56/20	Ms. Chrystelle Jouy (FR)	CA, CN, ES, FR, IT, JP, KE, KR, NL, PL, QZ, CLI, Euroseeds, ISF, Office
*Watermelon (<i>Citrullus lanatus</i> (Thunb.) Matsum. et Naka) (Partial revision: Ploidy)	TG/142/5 Rev.	Ms. Gosia Blokker (NL)	CA, ES, FR, IT, NL, QZ, CLI, Euroseeds, ISF, Office

Draft Test Guidelines for possible future discussion

Species	Basic Document
Water spinach (<i>Ipomoea aquatica</i>)	NEW
Garlic (<i>Allium sativum</i> L.) (Revision)	TG/162/4

[End of Annex II and document]