UPOV
International Union for the Protection of New Varieties of Plants

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Technical Working Party for Vegetables

TWV/59/19

Fifty-Ninth Session
Virtual meeting, May 5 to 8, 2025

Original: English
Date: May 8, 2025

REPORT

Adopted by the Technical Working Party for Vegetables (TWV)

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OPENING OF THE SESSION

1. The Technical Working Party for Vegetables (TWV) held its fifty-ninth session, organized by electronic means, from May 5 to 8, 2025. The list of participants is provided in Annex I to this report.

2. The session was opened by Mr. Yoshiyuki Ohno (Japan), Chairperson of the TWV, who welcomed the participants.

ADOPTION OF THE AGENDA

3. The TWV adopted the agenda as presented in document TWV/59/1 Rev.

PROCEDURES FOR DUS EXAMINATION

4. The TWV considered documents TWP/9/1 and TWV/59/18.

Guidance and information materials

TGP Documents

Document TGP/5 “Experience and Cooperation in DUS Testing”, Section 6 “UPOV Report on Technical Examination and UPOV Variety Description” (Revision)

5. The TWV agreed with the revision of document TGP/5 “Experience and Cooperation in DUS Testing”, Section 6 “UPOV Report on Technical Examination and UPOV Variety Description”, on the basis of document TGP/5, Section 6 (draft 1).

Document TGP/7: Development of Test Guidelines (Revision): Guidance Note (GN) 28 “Example Varieties” – Example varieties for asterisked quantitative characteristics when illustrations are provided

6. The TWV agreed with the proposal to amend document TGP/7, Guidance Note (GN) 28 “Example Varieties”, as provided in document TWP/9/5 and presented by an expert from Germany.

7. The TWV noted that example varieties would not be needed to clarify the states of expression when these were self-explanatory or could be effectively demonstrated by a diagram or illustration.

Characteristics observed in one growing cycle where the minimum duration of tests should normally be two independent growing cycles

8. The TWV received a presentation on “Characteristics observed in one growing cycle in DUS testing where the minimum duration of tests should normally be two independent growing cycles” from an expert from the European Union. A copy of the presentation is provided in document TWV/59/9.

9. The TWV considered whether the standard wording in UPOV Test Guidelines should be amended to clarify that certain characteristics could be assessed in one growing cycle only. The TWV noted the reports from Japan and Kenya on how the guidance was interpreted in those countries. The TWV agreed that the guidance provided flexibility for examination to be concluded after one growing cycle, in case a reliable result could be achieved or to conduct additional growing cycles, in case required.

Court case of general interest: *Allium cepa* L. “SK20”

10. The TWV received a presentation “Court Case of General Interest *Allium cepa* L. ‘SK20’” from an expert from the European Union. A copy of the presentation is provided in document TWV/59/8.

11. The TWV discussed the use of additional characteristics not included in test guidelines and noted one of the reasons provided by the Court that characteristics in the variety description were “not intended to reflect the expression of all characteristics resulting from the variety genotype but only certain characteristics which suffice to demonstrate compliance with the distinctness requirement.”

12. The TWV considered the proposal in document TWV/59/8 for variety descriptions to reduce the information provided on characteristics in which the candidate was distinct from the similar variety and agreed there were different views on the matter in the different Technical Working Parties (TWPs).

ASSESSING DISTINCTNESS IN DISEASE RESISTANCE CHARACTERISTICS

Disease resistance characteristics in Test Guidelines

13. The TWV considered document TWV/59/11.

14. The TWV agreed to invite UPOV members’ reports on additional characteristics in DUS examination, including disease resistance characteristics. The TWV agreed to invite leading experts to organize intersessional meetings of the subgroups of interested experts to advance discussions on partial revisions of Test Guidelines.

15. The TWV noted there were different capabilities among UPOV members for assessing disease resistance characteristics and agreed this provided challenges for their use in DUS examination and international harmonization.

Revision of the disease resistance characteristics in the EU

16. The TWV received a presentation “Revision of the disease resistance characteristics in the EU”, from an expert from the European Union. A copy of the presentation is provided in document TWV/59/10.

17. The TWV noted the invitation from the European Union for UPOV members to join the regional working groups established to discuss disease resistance characteristics in French Bean, Cucumber, Melon, Pepper, Tomato and Tomato Rootstocks. The TWV noted that interested experts should contact the Community Plant Variety Office of the European Union (CPVO) for further information.

18. The TWV noted the comments made by the representative of the International Seed Federation (ISF) that characteristics used at national or regional level and not included in UPOV Test Guidelines (“additional characteristics”) could constitute a barrier to taking over test reports, although no such cases had been reported.

19. The TWV noted the report from Germany that additional characteristics not included in Test Guidelines were considered when deciding to takeover test reports on a case-by-case basis using the similar criteria for all characteristics, including disease resistances.

20. The TWV agreed to propose a survey among UPOV members on whether additional characteristics not included in UPOV Test Guidelines could constitute a barrier to takeover test reports, for instance disease resistance characteristics, in particular when they provided the basis for distinctness from the most similar variety.

21. The TWV agreed that the survey should provide the context of discussions, including that disease resistance characteristics in UPOV Test Guidelines were not being assessed by all UPOV members. The TWV agreed that the survey should include questions, such as:

- Whether UPOV members would take-over test reports in case distinctness had been established based on an additional characteristic not included in the UPOV Test Guidelines;

- Whether there was a difference on decisions to take-over test reports based on whether the additional characteristic was a disease resistance characteristic.

INFORMATION DATABASES

Information on cooperation agreements for DUS examination

22. The TWV considered document TWP/9/2 and agreed with the proposal to discontinue the section on "Cooperation in DUS Examination" in the GENIE database, as set out in document TWP/9/2, paragraphs 7 to 26.

23. The TWV noted that information on "Practical experience in DUS examination" would continue to be collected and provided in the GENIE database and as a document prepared annually to the Technical Committee.

24. The TWV noted that, in 2024, 44 UPOV members (54%) had provided new data to the UPOV Plant Variety Database (PLUTO database). The TWV agreed to recall data contributors of the importance of the database for variety examination.

MOLECULAR TECHNIQUES IN DUS EXAMINATION

Guidelines for the validation of characteristic-specific molecular marker protocol as alternative method of observation

25. The TWV considered document TWP/9/4 and the proposed guidelines for validating assessment methods of characteristic-specific molecular markers for DUS examination, as presented by an expert from the Netherlands (Kingdom of).

26. The TWV agreed the following amendments to the text on "Table 1":

- Items 1 and 2: to update reference to current version of the Tomato Test Guidelines (TG/44/12)

- Item 8: to read "[…] In case the DNA marker test result does not confirm the declaration in the Technical Questionnaire, a field trial or bio-assay should be performed ~~to assess the correctness of the declaration in the Technical Questionnaire~~."

Reports on existing policies on confidentiality of molecular information

27. The TWV noted that UPOV members and observers were invited to report examples of policies on confidentiality and access to molecular data at the TWP sessions in 2025.

28. The TWV received a presentation on "Confidentiality of Molecular Information" from an expert from CropLife International, on behalf of the African Seed Trade Association (AFSTA), Asia and Pacific Seed Association (APSA), International Community of Breeders of Asexually Reproduced Horticultural Plants (CIOPORA), CropLife International, Euroseeds, International Seed Federation (ISF) and Seed Association of the Americas (SAA). The presentation is provided in document TWP/9/6.

29. The TWV noted that no reports on existing policies on confidentiality of molecular information had been reported in advance of the TWV session.

30. The TWV noted the report from Japan that was considering the use of DNA-based information as part of the information to be provided for plant variety protection. The TWV noted that Japan considered this information useful to support the exercise of breeders' rights.

31. The TWV noted the concern expressed by the breeders' organizations about revealing the sources of germplasm used by breeders in different breeding programs. The TWV agreed that breeders should be involved when selecting molecular markers for variety identification and managing variety collections, in particular when such information would be made publicly available.

32. The TWV recalled that the development of UPOV guidance was based on examples and experiences from UPOV members and observers. The TWV agreed that different approaches for discussion on confidentiality of molecular information should be considered, such as concrete cases and specific situations identified by the breeders' organizations.

EXPERIENCES WITH NEW TYPES AND SPECIES

Oil Pumpkin (*Cucurbita pepo* var. *styriaca*)

33. The TWV received a presentation on "Oil Pumpkin *(Cucurbita pepo* var*. styriaca)* within TG/119/4 Rev. (*Cucurbita pepo* L.) - Proposals by Austria and exchange of views concerning new and adopted characteristics", as provided in document TWV/59/2.

34. The TWV noted the invitation from Austria for collaboration on the development of characteristics for Oil Pumpkin and the revision of the Test Guidelines for Pumpkin. The TWV noted the expressions of interest of European Union, France, Japan, Netherlands (Kingdom of the) and Spain to support the revision of the Test Guidelines for Pumpkin. The TWV agreed that, alternatively, Austria could report the use of additional characteristics and states of expression using the template provided in document TGP/5, Section 10 "Notification of additional characteristics and states of expression."

TEST GUIDELINES

Measures to improve support for drafters of Test Guidelines

35. The TWV considered document TWP/9/3.

Measures on Test Guidelines (TGs) and online tool for drafting TGs

36. The TWV considered the proposals for discussion on options for improving the Test Guidelines structure, the tool for drafting Test Guidelines and the creation of national test guidelines, as set out in document TWP/9/3, Annex II.

37. The TWV considered the procedure for updating and how explanations for disease resistance characteristics were presented in Test Guidelines. The TWV agreed that the explanations should be presented in the Test Guidelines or a webpage (e.g. UPOV website) accessible via link in the Test Guidelines.

38. The TWV agreed that explanations on disease resistance characteristics should seek to use as much as possible standard language suitable for machine translation. The TWV agreed the explanations should provide contact details of the organizations that could provide assistance or further information about the methods.

39. The summary report of discussion at the fifty-ninth session of the TWV provided by the leading expert of the TC Sub-group on Test Guidelines, Ms. Margaret Wallace (United Kingdom) is provided in Annex II to this document.

Notification of Additional Characteristics and States of Expression

Test Guidelines for Pea (document TG/7/10): Resistance to Downy Mildew (Pv)

40. The TWV considered the additional characteristic notified on the Test Guidelines for Pea (document TG/7/10), as set out in document TWP/9/3, Annex III.

41. The TWV noted there was missing information on interpreting observations in relation to UPOV notes and agreed to invite the expert from the European Union to complement the explanation prior to further discussion.

42. The TWV considered the qualitative scale of notes used in the characteristic and discussed how to establish the cut-off point to define whether the variety had resistance absent or present. The TWV noted the explanation provided by the Netherlands (Kingdom of) that a variety with plants in classes 1 and 2 would be considered resistant; as soon as sporulation was observed, the variety would be considered susceptible.

43. The TWV noted that the interpretation of results in relation to states of expression were based on comparing the candidate variety to the control varieties used to define the cut-off point between the classes.

Technical Questionnaire, section 4.2: “Method of propagating the variety”

44. The TWV considered document TWP/9/3 and the lists with options for information on method of propagating the variety (Annex IV) that would be made available in UPOV PRISMA for the Technical Questionnaires of certain Test Guidelines where no structured information (open text box) was provided in Section 4.2 (“method of propagating the variety”).

45. The TWV noted the support from breeders’ organizations for providing structured information in TQ 4.2 and agreed that the lists with options should be considered to ensure the suitability of all the options proposed.

46. The TWV considered the Test Guidelines for vegetables presented in document TWP/9/3, Annex IV and agreed the following procedure:

- TWV experts were invited to provide comments on the information on method of propagating the variety for inclusion in the Technical Questionnaires of the Test Guidelines of vegetables crops presented in Annex III to this report.

- Comments should be submitted to the Office of the Union by June 6, 2025 (email to: upov.mail@upov.int)

- In case comments were received, the lists of options for information on methods of propagating the variety would be presented for consideration by the TWV, at its sixtieth session, to be held in 2026.

- The lists of options for information on method of propagating the variety receiving no comments would be considered as agreed by the TWV and proposed to the Technical Committee for inclusion in the Technical Questionnaires of the respective Test Guidelines.

Matters to be resolved concerning Test Guidelines put forward for adoption by the Technical Committee: Cucumber, Gherkin (documents TG/61/7 Rev. 3 and TWV/59/12)

47. The TWV considered the partial revision of the Test Guidelines for Cucumber for inclusion of the characteristic “Resistance to Cucumber green mottle mosaic virus (CGMMV)”, which had been put forward for adoption by the Technical Committee in 2024 (document TWV/58/6) and referred back to the TWV. The TWV noted that the characteristic had been introduced in the test guidelines of the European Union in 2025.

48. The TWV agreed that the characteristic should be revised using a scale of three notes (QN).

49. The TWV considered the use of a qualitative (QL) scale of notes for the characteristic CGMMV, which was expressed with a continuous range of symptoms. The TWV agreed there was no clear gap between the states of expression “absent / present”.

50. The TWV considered the recommendation made by the Enlarged Editorial Committee (TC-EDC) to use a quantitative (QN) scale for the characteristic (e.g. three notes). The TWV noted the explanation from France and the Netherlands (Kingdom of) that no robust threshold control variety had been identified to enable defining the cut-off point for a third state of expression, other than absent / present.

51. The TWV noted that the requirement for example varieties in the case of QN characteristics with "1-5" / "1-3" scales was to provide example varieties for at least two states of expression (see: document TGP/7 "Development of Test Guidelines", GN 28, Sec. 2.4). The TWV agreed that only two example varieties would be required for disease resistance characteristics with three states of expression.

52. The TWV discussed the borderline between two states of expression around the threshold control and the difference required to demonstrate a clear difference between two varieties close to the borderline (e.g. high end of absent and low end of present). The TWV noted the experience from France on the use of statistical analysis to establish distinctness between varieties in this situation.

53. The TWV agreed that the approach for QN disease resistance characteristics using threshold controls would be suitable for the assessment of distinctness on side-by-side comparisons, with the use of statistical analysis, when required. The TWV agreed that the approach would not be suitable for grouping varieties based on variety descriptions.

54. The TWV noted the use of disease resistance characteristics for grouping varieties and agreed that the use of a qualitative scale (QL) for a quantitative (QN) characteristic addressed borderline varieties the same as consecutive notes in QN scales (e.g. notes 1/9 = 1/2 or 2/3).

55. The TWV discussed the assessment of uniformity of QN disease resistance characteristics described as QL and the possibility of having plants from the same variety in classes from different states of expression. The TWV noted the explanation from France that uniformity assessment considered the distribution of plants across classes and off-types plants outside the expected range of distribution.

56. The TWV discussed general matters applying to quantitative disease resistance characteristics and agreed to invite the Netherlands (Kingdom of) to identify aspects in UPOV guidance that could be amended to reflect the particular features of quantitative disease resistance characteristics, such as procedures to address borderline varieties.

57. The TWV noted the comment from Japan that future discussions on disease resistance characteristics would benefit from the participation of legal experts, such as UPOV member representatives at the Administrative and Legal Committee (CAJ).

Discussions on draft Test Guidelines

General comment:

Disease resistance characteristics	to add the following disclaimer for disease resistance characteristics: "These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult for example the ISF webpage for the latest information.]"

Full draft Test Guidelines

Asparagus (*Asparagus officinalis* L.)

58. The subgroup discussed document TG/130/5(proj.1), presented by Ms. Gosia Blokker (Netherlands (Kingdom of the)), and agreed the following:

2.3	to check whether to specify that vegetatively propagated varieties are inbred lines
Char. 3	to delete "intensity of"
Char. 5	state 2 to read "medium"
Char. 7, 8	- to delete "excluding bracts" (covered by Ad. 7) - to replace (a) with (b)

Char. 8	- to delete “intensity of” - to reduce scale to 3 notes - to add example variety “Harumurasakil Efu” for state “medium” - to add example variety “Sanukinomezame Violeta” for state “strong”
Char. 15	to be reviewed according to previous partial revision
8.1	to add new explanation to have the following explanations: a) to be observed at emergence of spears NEW b) to be observed at harvest time c) to be observed on non-harvested plants
Ad. 4	to replace current drawings with improved ones
Ad. 7	explanation to read “Observations should be made on the spear from the ground to the apex, excluding the bracts.”
Ad. 10	to read “Observations should be made on the middle third of the plant.”

*Eggplant (*Solanum melongena* L.) (Revision)

59. The subgroup discussed document TG/117/5(proj.5), presented by Ms. Cécile Marchenay (Netherlands (Kingdom of the)), and agreed the following:

UPOV Code	to add synonym *Solanum ovigerum* Dunal
4.2.3	to delete repeated “of” (“For the assessment of uniformity…”)
6.4	to add: “The main colors of the example varieties are indicated as follows in the Table of Characteristics for characteristic 24 “Fruit: intensity of main color of skin” (g) green (p) purple (v) violet”
Char. 1	to delete "intensity of"
Char. 3, 6, 12, 24	to add (*) (used in TQ 5.)
Char. 4	to delete “the” (twice)
Char. 7	to add explanation “Observations should be made on the total surface of the leaf blade.”
Char. 8	to read “Leaf blade: depth of incisions of margin”
Char. 18	- to read “Fruit: shape in longitudinal section” - states to read oblate (1), circular (2), ovate (3), obovate (4), pyriform (5), clavate (6), broad oblong (7), narrow cylindrical (8)
Char. 20	- state 1 to read “cordate” - state 2 to read “truncate”
Char. 21	state 1 to read “absent or very shallow”
Char. 22	- state 1 to read “absent or weak” - to replace example variety “Hakatanaga” with “Slim Purple”
Char. 23, 27, 32	to move “purple” before “violet”
Char. 24	to delete example variety “Tsudanaga (p)”
Char. 27	to add example variety “Rotonda bianca sfumata di rosa” for state “violet”
Char. 28	to add to TQ 5 (as it is a grouping char.)
Char. 29	to add example variety “Pinstripe” for state 3
Char. 32	to delete example variety “Tsudanaga”
8.1 (c)	to read “Flower and inflorescence: observations should be made on the first fresh, fully opened flower when 50% of the plants of the variety has opened flowers on the second or the third inflorescence.”
Ad. 8	to delete first sentence and second sentence to read “Incisions on margins may form some lobing that never reach the midrib.”

Ad. 18	to replace current illustrations with the grid below

	← broadest part →			
	below middle	at middle	above middle	
elongated		 8 narrow oblong	 6 clavate	
	 3 ovate	 7 broad oblong	 4 obovate	 5 pyriform
rounded		 2 circular		
compressed		 1 oblate		

Ad. 23	to delete photographs and replace with explanation “Purple varieties have a reddish hue. Violet varieties have a blueish hue.”
Ad. 35	to delete photographs and keep drawings only
TQ 4.2.2	to be deleted (TG Template export issue)

Garlic (*Allium sativum* L.) (Revision)

60. The subgroup discussed document TG/162/5(proj.2), presented by Ms. Chrystelle Jouy (France), and agreed the following:

2.3	- to read "… or in the form of bulbs free from virus in the case of vegetatively propagated varieties." - to check whether additional specifications are required for See-propagated varieties
Table of Chars.	- to add underlining to "Only varieties with…" - to add example varieties (if possible based on ring test)
Char. 1	to add explanation
Char. 8	- to reduce scale to 5 notes
Char. 8, 9	- to have same explanation to read "Observations should be made at ground level."
Char. 11	- to check whether to be indicated as QN and have 3 states (absent or weak, medium, strong) - to add time of observation or add (a) if that is the correct time of observation
Char. 12	- to reduce scale to 5 notes - to have same time of observations as for Char. 11
Char. 13	to delete "the"
Char. 16	to be reviewed
Char. 21	- to check whether really ground color - to check whether there is an overlap with char. 22 (state reddish white is anthocyanin) or whether state 3 to read "brownish white" (no anthocyanin)
Char. 22, 23	to check whether to be combined in a QN char. with state 1 to read "absent or very weak"
Char. 24	to add explanation

Ginger (*Zingiber officinale* Rosc.) (Revision)

61. The subgroup discussed document TG/153/4(proj.2), presented by Mr. Toshiya Kobayashi (Japan), and agreed the following:

Char. 2	to replace "long" with "tall" in states 6 to 9
Char. 6	- to add example variety "Kintoki" for state 2 - to add example variety "Tosadai" for state 4
Char. 7	- to add example variety "Kintoki" for state 2 - to add example variety "Tosadai" for state 4
Char. 9	to read "Stem: thickness"
Char. 11	to reduce scale to 5 notes by deleting even states
Char. 12	to read "Rhizome: weight"
Char. 14	to add example variety "Kintoki" to state 5
Char. 15	- to reduce scale to 5 notes by deleting even states - to check whether to add explanation on where the characteristic should be observed
Char. 16	- to check whether to add explanation of "sections" - to add example variety "Tosadai" for state 3 - to add example variety "Kintoki" for state 7
Char. 19	to add example variety "Tosaichi" for state 1
8.1 (a)	to read "Observations should be made when growing most vigorously."
8.1 (b)	to read "Observations should be made before the end of the growing season."
Ad. 2	to read "Observation should be made from ground level to the highest point."
Ad. 5, 6, 9	to replace "main stem" with "plant"
Ad. 6, 9	to replace "Observation or measurement" with "Assessment"
Ad. 13	to delete photographs
Ad. 14	to read "Observations should be made on the number of nodes on rhizome and the touch and texture of rhizome."
Ad. 19	to be deleted

Ad. 20	to read “The time of sprouting is reached when 50% of the plants have emerged above ground.”

*Parsley (*Petroselinum crispum* (Mill.) Nyman ex A.W. Hill) (Revision)

62. The subgroup discussed document TG/136/6(proj.3), presented by Ms. Susanne Wöster, on behalf of the Leading Expert Ms. Swenja Tams (Germany), and agreed the following:

4.2.3	to be deleted
5.3	- to add: “Grouping of varieties of leaf parsley is based on characteristic 6 Leaf blade: curling Absent: flat leaf parsley (FL) Present: curled leaf parsley (CL)” - to add “(R)” to root parsley in the last line of 5.3
Char. 3	to add explanation to read “Observations should be made on the broadest part of the plant.”
Char. 5	to be moved after char. 19
Char. 8	- to check whether to read “… Leaf: openness or find better way to describe this characteristic - to add illustrations
Char. 9	- to read “…: Leaf blade: recurving of lobes” - to add example varieties “Ines (CL), Titan (CL)” to start one and delete Titan from state 9
Char. 14	- to read “Leaf blade: length between…” - to be moved before char. 17
Char. 16	to check whether to be deleted or to check what this characteristic is describing (width, position of broadest part, shape of apex, etc.) and to reword accordingly
Ad. 1	to use the same wording as in char. 1
Ad. 8	to read “Observations should be made looking through representative leaves from above.”
Ad. 9	second photo for state 9: to move arrow to upper leave, where recurving is clearer to be seen
TQ 4.2.2	to be deleted (TG Template export issue)

Partial revisions

*Broccoli (*Brassica oleracea* L. var. *italica* Plenck)
*Brussels Sprouts (*Brassica oleracea* L. var. *gemmifera* DC.)
*Cabbage (*Brassica oleracea* L.: *Brassica* (White Cabbage Group); *Brassica* (Savoy Cabbage Group); *Brassica* (Red Cabbage Group))
*Cauliflower (*Brassica oleracea* L. convar *botrytis* (L.) Alef. var. *botrytis* L.)
*Kohlrabi (Brassica oleracea L. convar. acephala (DC.) Alef. var. gongylodes L. (Brassica oleracea L. Gongylodes Group))

63. The TWV discussed the proposed addition of a new characteristic “Resistance to *Plasmodiophora brassicae* (Pb)”, as presented in documents TWV/59/13 to TWV/59/17, presented by Ms. Gosia Blokker (Netherlands (Kingdom of the)), and agreed the following:

New char.	to be added to TQ 5. with option “not tested”

*Cauliflower (*Brassica oleracea* L. convar *botrytis* (L.) Alef. var. *botrytis* L.)

64. The TWV discussed document TWV/59/16, presented by Ms. Gosia Blokker (Netherlands (Kingdom of the)), and agreed the following, further to the addition of a new characteristic “Resistance to *Plasmodiophora brassicae* (Pb)”:

Char. 28	to add to TQ 5.

Ad. 28	explanation of field trial, paragraph below explanation of states of expression to read “State “partially present” is linked to hybrids produced with a motherline which is heterozygous for genic male sterility (GMS), such hybrids segregate in a ratio 1:1 for male sterility. If the segregation occurs in the predicted manner, the hybrid should be classified as partially present (state 2).”
TQ 4.	to keep TQ 4. unchanged and add the following wording to TQ 7.3 instead: “In case of parental lines: 7.3.1. Method of propagation of the variety: (i) seed propagated [ ] (ii) vegetatively propagated [ ] In case of varieties with note 2 (“partially present”), please indicate: 7.3.2. Parental background of hybrids: (i) seed propagated parents [ ] (ii) one or more vegetatively propageted parents [ ]”

*Lettuce (*Lactuca sativa* L.)

65. The subgroup discussed document TWV/59/6, presented by Mr. Dominique Rousseau (France), and agreed the following:

New isolates BI: 38EU, BI: 39EU, BI: 40EU	to add to TQ 5 with option “not tested”

*Maize (*Zea mays* L.)

66. The subgroup discussed document TWV/59/5-TWA/54/5, presented by Ms. Cécile Marchenay (Netherlands (Kingdom of the)), and agreed the following:

Char. 24.1, 24.2	to display all 9 notes to keep (*)
Char. 38, New Char. after 38	to check color name “blue black” and whether to replace with an appropriate color according to TGP/14 (e.g. blackish blue)

*Shiitake (*Lentinula edodes* (Berk.) Pegler)

67. The subgroup discussed document TWV/59/7, presented by Mr. Takeshi Sugisawa, on behalf of the Leading Expert Mr. Yoshiyuki Ohno (Japan), and agreed the following:

Char. 3	to display all 9 states with temperatures from 21 to 29 °C
Char. 12	to display all 9 states
Char. 20	to have states from “very short” to “very tall”
Char. 31	- to read “Fruit body: weight” - to display all 9 notes - to keep (+) and explanation to read “Observations should be made on fresh fruit at harvest maturity.”

* Tomato (*Solanum lycopersicum* L.)

68. The subgroup discussed document TWV/59/4, presented by Ms. Cécile Marchenay (Netherlands (Kingdom of the)), and agreed the following:

New Char. 58	to add to TQ 5 with option “not tested”
Ad. 51, 9.3	first control variety under “Resistant for Race A” to read “Purdue 135” instead of “Purdue”

Ad. 47	- to read as follows: "Ad. 47, 48, and 49: Resistance to *Fusarium oxysporum* f. sp. *lycopersici* - Race 0EU/1US (Fol: 0EU/1US), Race 1EU/2US (Fol: 1EU/2US) and Race 2EU/3US (Fol: 2EU/3US) Resistance to *Fusarium oxysporum* f. sp. *lycopersici* (Fol) - Race 0EU/1US to be tested in a bio-assay (method i). Resistance to *Fusarium oxysporum* f. sp. *lycopersici* (Fol) - Race 1EU/2US to be tested in a bio-assay (method i) and/or in a DNA marker test on gene *I-2* (method ii). Resistance to *Fusarium oxysporum* f. sp. *lycopersici* (Fol) - Race 2EU/3US - to be tested in a bio-assay (method i). In case of a bio-assay, type of observation is VS/VG. In case of a DNA marker test, type of observation is MS." - Based on the changes above, the following consequential changes are to be made: - to add MS to char. 48 - to add VS to chars. 47, 48, 49
Ad. 47 (ii)	title to read "DNA marker test"
Ad. 47 (ii), 8	to add the following as first paragraph: "In case the DNA marker test result does not confirm the declaration in the Technical Questionnaire, a field trial or bio-assay should be performed."
Ad. 49	to delete individual title and reference to Ad. 47

*Tomato Rootstocks

69. The subgroup discussed document TWV/59/3, presented by Ms. Cécile Marchenay (Netherlands (Kingdom of the)), and agreed the following:

Char. 22 and Ad. 22	to review example varieties and control varieties

Recommendations on draft Test Guidelines

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

70. The TWV agreed that the following draft Test Guidelines be submitted to the TC for adoption at its sixty-first session, to be held in Geneva on October 20 and 21, 2025, on the basis of the following documents and the agreed changes presented in this report:

Full draft Test Guidelines

Subject	Basic Document(s) (2025)
*Eggplant (*Solanum melongena* L.) (Revision)	TG/117/5(proj.5)

Partial revisions

Subject	Basic Document(s) (2025)
*Broccoli (*Brassica oleracea* L. var. *italica* Plenck) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot)	TG/151/5 Rev., TWV/59/13
*Brussels Sprouts (*Brassica oleracea* L. var. *gemmifera* DC.) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot)	TG/54/7 Rev. 2, TWV/59/14

*Cabbage (*Brassica oleracea* L.: *Brassica* (White Cabbage Group); *Brassica* (Savoy Cabbage Group); *Brassica* (Red Cabbage Group)) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot)	TG/48/7 Rev. 2, TWV/59/15
*Cauliflower (*Brassica oleracea* L. convar *botrytis* (L.) Alef. var. *botrytis* L.) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot) - Revision of char. 28 "Male sterility" - TQ	TG/45/7 Rev. 2, TWV/59/16
*Kohlrabi (*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *gongylodes* L. (*Brassica oleracea* L. *Gongylodes* Group)) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot)	TG/65/4 Rev. 2, TWV/59/17
*Lettuce (*Lactuca sativa* L.) - Addition of *Bremia lactucae* Isolates BL: 38EU, Bl: 39EU, Bl: 40EU	TG/13/11 Rev. 2, TWV/59/6
*Maize (*Zea mays* L.)[1] - Characteristics 24.1 and 24.2 - Addition of new characteristics Secondary color of grain - addition of characteristic to TQ 5	TG/2/7, TWV/59/5-TWA/54/5
*Shiitake (*Lentinula edodes* (Berk.) Pegler) - Char. 4 "Mycelium: growth rate at 10°C" - Char. 5 "Mycelium: growth rate at 15°C" - Char. 6 "Mycelium: growth rate at 20°C" - Char. 7 "Mycelium: growth rate at 25°C" - Char. 8 "Mycelium: growth rate at 30°C" - Char. 12 "Cap: height" - Char. 20 "Gill: width"	TG/282/1 Rev., TWV/59/7
*Tomato (*Solanum lycopersicum* L.) - to add race H to *Passalora fulva* - to add an alternative molecular marker method (using makers on I2) for resistance to *Fusarium oxysporum* f. sp. *lycopersici* (Fol) (race 1EU/2US)	TG/44/12(proj.4), TWV/59/4

(b) Test Guidelines to be discussed at the sixtieth session

71. The TWV agreed to discuss the following draft Test Guidelines at its sixtieth session:

Full draft Test Guidelines

Subject	Basic Document(s) (2025)
*Asparagus (*Asparagus officinalis* L.)	TG/130/5(proj.1)
Garlic (*Allium sativum* L.) (Revision)	TG/162/5(proj.2)
*Ginger (*Zingiber officinale* Rosc.) (Revision)	TG/153/4(proj.2)
Vegetable Marrow, Squash (*Cucurbita pepo* L.) (Revision)	TG/119/4 Rev.
*Parsley (*Petroselinum crispum* (Mill.) Nyman ex A.W. Hill)	TG/136/6(proj.3)

Partial revisions

Subject	Basic Document(s) (2025)
*Cucumber, Gherkin (*Cucumis sativus* L.) - addition of resistance to *Cucumber green mottle mosaic virus*	TG/61/7 Rev. 3, TWV/59/12
*Tomato Rootstocks - *Meloidogyne incognita* (Nematodes): to change the states of expression (same as tomato) and control varieties	TG/294/1 Rev. 5, TWV/59/3

[1] Subject to discussions at the fifty-fourth session of the TWA, to beld in Arusha, United Republic of Tanzania, from May 19 to 22, 2025

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

MATTERS FOR INFORMATION

Reports on developments in plant variety protection from members and observers

73. The TWV noted the information on developments in plant variety protection from members and observers provided in document TWV/59/2 Prov. The TWV noted that reports submitted to the Office of the Union after April 18, 2025, and until May 8, 2025, would be included in the final version of document TWV/59/2.

Reports on developments in UPOV

74. The TWV noted the following matters for information, as set out in document TWP/9/1:

(i) Revision of TGP Documents in 2024
(ii) Revision of Information Documents in 2024
(iii) Revision of Explanatory Notes on Variety Denominations (new denomination class for *Prunus*)
(iv) Discussion on disease resistance characteristics in DUS examination
(v) Matters arising from the Technical Working Parties
(vi) Organization of the 2025 Seminar on cooperation with breeders in DUS examination
(vii) Measures to improve support provided for DUS examination

DATE AND PLACE OF THE NEXT SESSION

75. At the invitation of the United States of America, the TWV agreed to hold its sixtieth session in Pacific Grove, California, United States of America, from May 18 to 21, 2026.

FUTURE PROGRAM

76. The TWV agreed that documents for its sixtieth session should be submitted to the Office of the Union by April 4, 2026. The TWV noted that items would be deleted from the agenda if the planned documents did not reach the Office of the Union by the agreed deadline.

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

1. Opening of the session
2. Adoption of the agenda

Matters for discussion

3. Procedures for DUS examination (presentations invited)
4. Proposals for ring-tests (presentations invited)
5. Assessing distinctness in disease resistance characteristics (document to be prepared by the Netherlands (Kingdom of) and presentations invited)
6. Image analysis of vegetable crops (presentations invited)
7. Molecular techniques in variety examination (presentations invited)
8. Experiences with new types and species (oral reports invited)
9. Discussions on draft Test Guidelines (Subgroups)
10. Recommendations on draft Test Guidelines
11. Date and place of the next session
12. Future program

13. Adoption of the report of the session (if time permits)

Matters for information

14. Reports on developments in plant variety protection from members and observers (reports invited)

15. Reports on developments in UPOV (general developments, including variety denominations, information databases, exchange and use of software and equipment)

16. Closing of the session

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

[Annex I follows]

ANNEX I

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[Annex II follows]

ANNEX II

TC SUB-GROUP ON TEST GUIDELINES

Summary of the discussion at the 59th Session of the TWV.

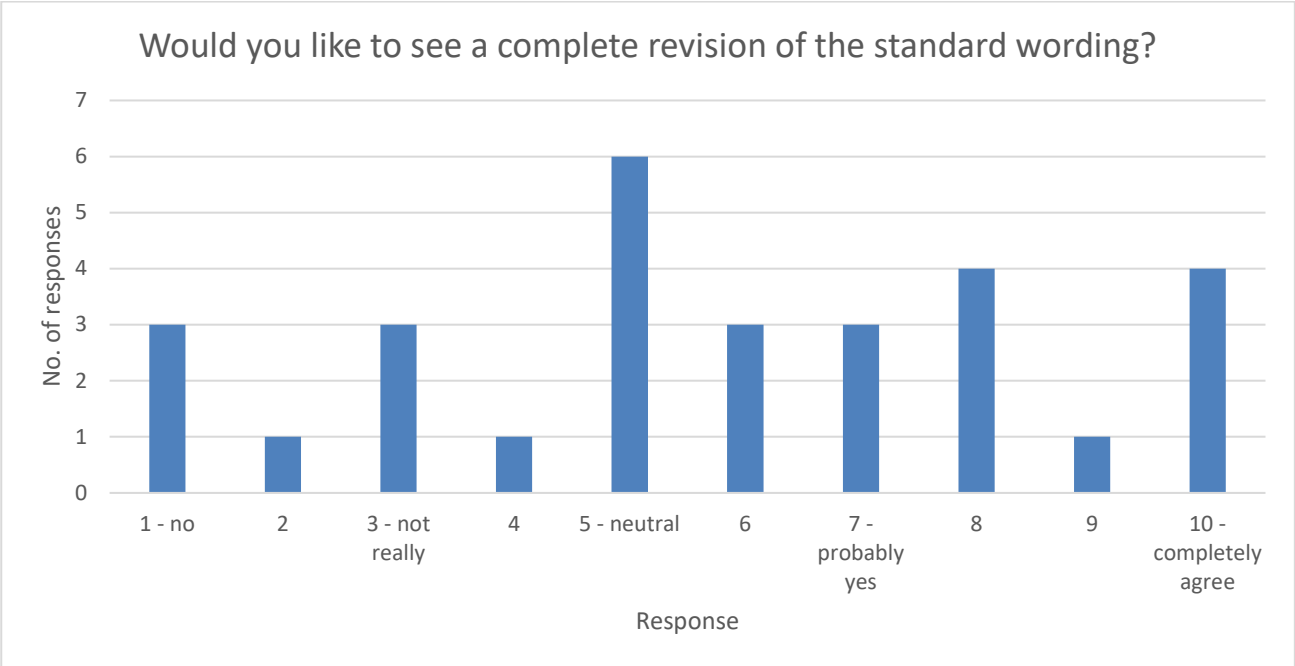
The TWV discussed the presentation from the leading expert of the subgroup, Margaret Wallace (United Kingdom), a copy of which is provided in document TWP/9/3. The group also submitted responses to an online questionnaire.

Prior to the online survey, the group discussed the importance of example varieties. It was noted that regional sets of example varieties are important so that the characteristics are expressed appropriately in the growing conditions of that region. The TWV also recognized the significant role of illustrations in cases where example varieties were not readily available.

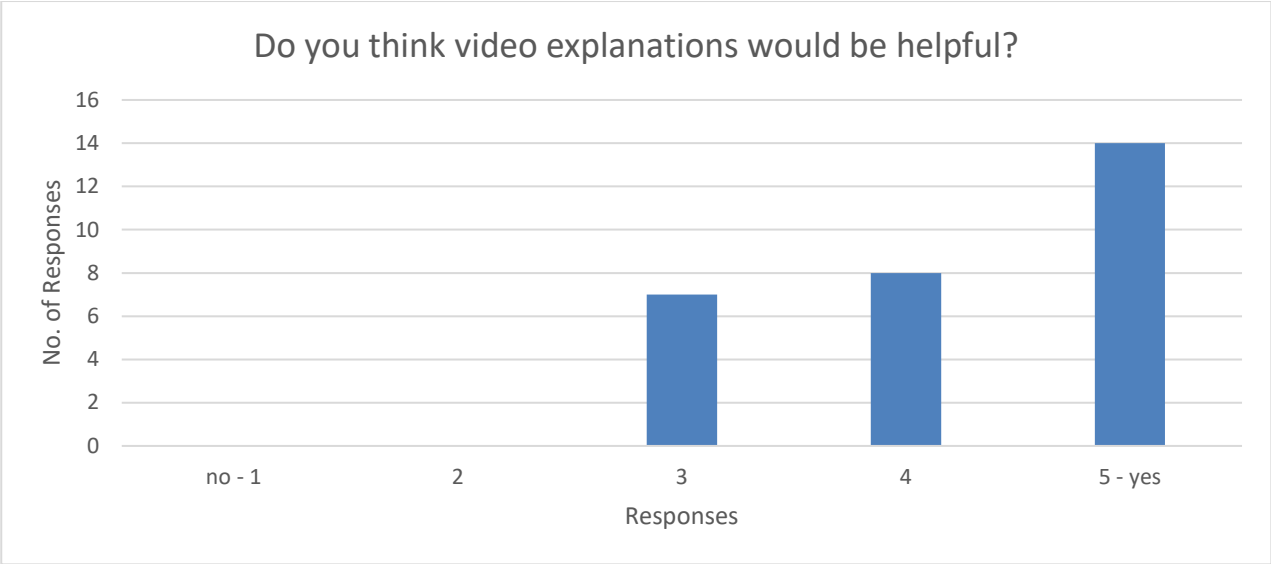
It was recognized that the TWV had the most experience with the development of disease resistance characteristics, therefore would be best placed to provide opinion on these including the associated explanations. The group agreed that it was essential that details of the methods are included in the Test Guidelines for the purposes of harmonization particularly in the exchange of reports. It was noted that the explanations for disease resistance characteristics included contact details of experts with experience in the assessment of the characteristics. It was agreed that there was scope to improve the presentation of the information to streamline the process, with three proposals made:

1. Present the explanations in English only to avoid the cost of translation of technical material while developing further translation options.
2. As far as possible use a standardized template to facilitate translation.
3. Provide a link in the Test Guidelines to a document on the UPOV website that contains the explanation of the characteristic.

It was agreed that there is an opportunity to increase efficiency in the process for revision of Test Guidelines when including disease resistance characteristics. It is likely this process needs to be agreed first, so that the format of the Test Guidelines can be adapted appropriately.

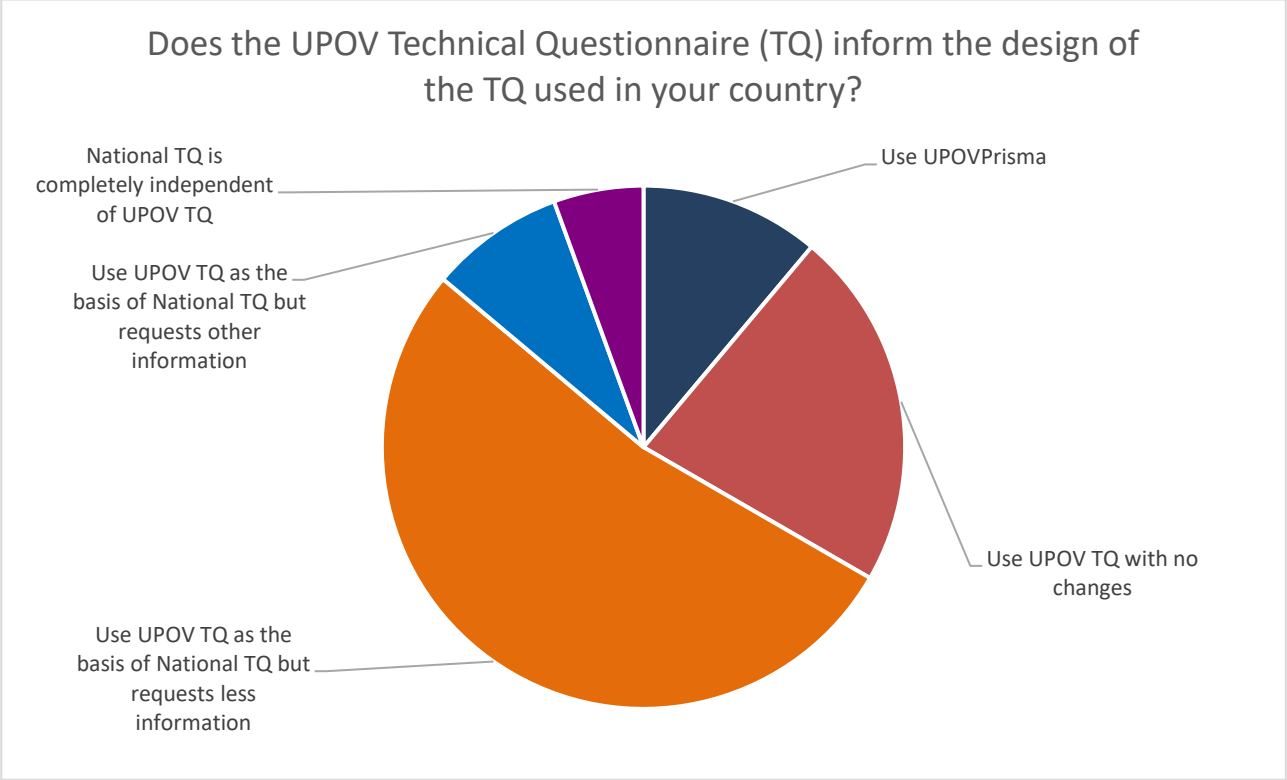


Of the 29 responses to the questionnaire, 22 said that they do print the Test Guidelines. Of those who print, 10 said they only print part(s) of the document, with the table of characteristics (section 7) and associated explanations (section 8) being the most printed section of the Test Guidelines.



The summary of the group responses to the questionnaire indicated that illustrations, diagrams, or photographs was the preferred method of harmonizing observations; followed by text explanations, then example varieties in the order of regional sets, across the UPOV membership, and then national.

The questionnaire included questions related to the use of the UPOV Technical Questionnaires.



The group had mixed opinions on whether the TQ should remain part of the Test Guidelines (34%) or form a separate document (38%). The remaining responses were unsure and would have to check (28%).

The TWV did not agree on whether guidance on methods being contained in a separate document. They were in favor of having a structured template for guidance on techniques to ensure consistent presentation.

The group felt that links within the document could help usability, or to put the explanation of characteristics beside the characteristics.

Another suggestion was received to include the explanation from the TG in the technical questionnaire to help the applicant complete the form.

Follow-up actions

This summary of the discussion and the results of the online questionnaire will be collated with those from discussions at the 2025 sessions of the TWO, TWA, and TWF, along with other comments made during the discussions and presented to the Technical Committee for consideration at its sixty-first session.

Margaret Wallace (Niab)
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[Annex III follows]

ANNEX III

TECHNICAL QUESTIONNAIRE, SECTION 4.2: “METHOD OF PROPAGATING THE VARIETY”

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	LATIN
007	Pea	Pois	Erbse	Guisante	Pisum sativum L.

4.2 Method of propagating the variety

Information on method of propagating the variety

☑ **Seed-propagated varieties**

- ☑ Self-pollination
- ☑ Other (please specify):

☑ **Other (please specify):**

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	LATIN
062	Rhubarb	Rhubarbe	Rhabarber	Ruibarbo	Rheum rhabarbarum L.

4.2 Method of propagating the variety

Information on method of propagating the variety

☑ **Seed-propagated varieties**

- ☑ Cross-pollination
- ☑ Other (please specify):

☑ **Vegetatively propagated varieties**

- ☑ Tuber
- ☑ Cuttings
- ☑ in vitro propagation
- ☑ Division
- ☑ Rhizomes
- ☑ Other (please specify):

☑ **Other (please specify):**

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	LATIN
104	Melon	Melon	Melone	Melón	Cucumis melo L.

4.2 Method of propagating the variety

Information on method of propagating the variety

☑ **Seed-propagated varieties**

- ☑ Self-pollination
- ☑ Cross-pollination
  - ☑ Cross-pollination-population
- ☑ Hybrid
  - ☑ Single hybrid
- ☑ Inbred line
- ☑ Other (please specify):

☑ **Vegetatively propagated varieties**

- ☑ Cuttings
- ☑ in vitro propagation
- ☑ Other (please specify):

☑ **Other (please specify):**

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	LATIN
119	Vegetable Marrow, Squash	Courgette	Zucchini	Calabacín	Cucurbita pepo L.

4.2 Method of propagating the variety
Information on method of propagating the variety

☑ **Seed-propagated varieties**
- ☑ Self-pollination
- ☑ Cross-pollination
  - ☑ Cross-pollination-population
- ☑ Hybrid
  - ☑ Single hybrid
- ☑ Inbred line
- ☑ Other (please specify):

☑ **Vegetatively propagated varieties**
- ☑ Cuttings
- ☑ in vitro propagation
- ☑ Other (please specify):

☑ **Other (please specify):**

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	LATIN
165	Dill	Aneth	Dill	Eneldo	Anethum graveolens L.

4.2 Method of propagating the variety
Information on method of propagating the variety

☑ **Seed-propagated varieties**
- ☑ Self-pollination
- ☑ Cross-pollination
  - ☑ Cross-pollination-population
- ☑ Hybrid
  - ☑ Single hybrid
- ☑ Other (please specify):

☑ **Vegetatively propagated varieties**
- ☑ Cuttings
- ☑ Other (please specify):

☑ **Other (please specify):**

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	LATIN
167	Okra	Okra	Okra	Ocra	Abelmoschus esculentus (L.) Moench

4.2 Method of propagating the variety
Information on method of propagating the variety

☑ **Seed-propagated varieties**

- ☑ Self-pollination
- ☑ Cross-pollination
  - ☑ Cross-pollination-population
- ☑ Hybrid
  - ☑ Single hybrid
- ☑ Other (please specify):

☑ **Vegetatively propagated varieties**

- ☑ Cuttings
- ☑ in vitro propagation
- ☑ Other (please specify):

☑ **Other (please specify):**

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	LATIN
282	Shiitake	Shiitake	Pasaniapilz	Shiitake	Lentinula edodes (Berk.) Pegler, Lentinus elodes (Berk.) Sing.

4.2 Method of propagating the variety
Information on method of propagating the variety

☑ **Vegetatively propagated varieties**

☑ **Other (please specify):**

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	LATIN
291	Oyster Mushroom; Eringi, King Oyster Mushroom; Lung Oyster Mushroom	Pleurote en coquille	Seitling, Austernseitling, Drehling; Kräuterseitling	Girgola, Seta de ostra, Champiñon ostra; Seta de cardo; Pleuroto pulmonado, Pleuroto de verano	Pleurotus ostreatus (Jacq.) P. Kumm.; Pleurotus eryngii (DC.) Quél.; Pleurotus pulmonarius (Fr.) Quél.

4.2 Method of propagating the variety
Information on method of propagating the variety

☑ **Vegetatively propagated varieties**

☑ **Other (please specify):**

[Annex IV follows]

ANNEX IV

LIST OF LEADING EXPERTS

DRAFT TEST GUIDELINES TO BE SUBMITTED TO THE TECHNICAL COMMITTEE IN 2025

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

before June 9, 2025

Full draft Test Guidelines

Species	Basic Document	Leading Expert(s)
*Eggplant (*Solanum melongena* L.) (Revision)	TG/117/5(proj.5)	Ms. Cécile Marchenay (NL)

Partial revisions

Species	Basic Document	Leading Expert(s)
*Broccoli (*Brassica oleracea* L. var. *italica* Plenck) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot)	TG/151/5 Rev., TWV/59/13	Ms. Gosia Blokker (NL)
*Brussels Sprouts (*Brassica oleracea* L. var. *gemmifera* DC.) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot)	TG/54/7 Rev. 2, TWV/59/14	Ms. Gosia Blokker (NL)
*Cabbage (*Brassica oleracea* L.: *Brassica* (White Cabbage Group); *Brassica* (Savoy Cabbage Group); *Brassica* (Red Cabbage Group)) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot)	TG/48/7 Rev. 2, TWV/59/15	Ms. Gosia Blokker (NL)
*Cauliflower (*Brassica oleracea* L. convar *botrytis* (L.) Alef. var. *botrytis* L.) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot) - Revision of char. 28 "Male sterility" - TQ	TG/45/7 Rev. 2, TWV/59/16	Ms. Gosia Blokker (NL)
*Kohlrabi (*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *gongylodes* L. (*Brassica oleracea* L. *Gongylodes* Group)) - to add new characteristic "Resistance to *Plasmodiophora brassicae* (Pb)" (clubroot)	TG/65/4 Rev. 2, TWV/59/17	Ms. Gosia Blokker (NL)
*Lettuce (*Lactuca sativa* L.) - Addition of *Bremia lactucae* Isolates BL: 38EU, Bl: 39EU, Bl: 40EU	TG/13/11 Rev. 2, TWV/59/6	Mr. Dominique Rousseau (FR)
*Maize (*Zea mays* L.)[2] - Characteristics 24.1 and 24.2 - Addition of new characteristics Secondary color of grain - addition of characteristic to TQ 5	TG/2/7, TWV/59/5-TWA/54/5	Ms. Cécile Marchenay (NL)
*Shiitake (*Lentinula edodes* (Berk.) Pegler) - Char. 4 "Mycelium: growth rate at 10°C" - Char. 5 "Mycelium: growth rate at 15°C" - Char. 6 "Mycelium: growth rate at 20°C" - Char. 7 "Mycelium: growth rate at 25°C" - Char. 8 "Mycelium: growth rate at 30°C" - Char. 12 "Cap: height" - Char. 20 "Gill: width"	TG/282/1 Rev., TWV/59/7	Mr. Yoshiyuki Ohno (JP)

[2] Subject to discussions at the fifty-fourth session of the TWA, to beld in Arusha, United Republic of Tanzania, from May 19 to 22, 2025

Species	Basic Document	Leading Expert(s)
*Tomato (*Solanum lycopersicum* L.) - to add race H to *Passalora fulva* - to add an alternative molecular marker method (using makers on I2) for resistance to *Fusarium oxysporum* f. sp. *lycopersici* (Fol) (race 1EU/2US)	TG/44/12(proj.4), TWV/59/4	Ms. Cécile Marchenay (NL)

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWV/60
(* indicates possible final draft Test Guidelines)

(Guideline date for Subgroup draft to be circulated by Leading Expert: February 7, 2026
Guideline date for comments to Leading Expert by Subgroup: March 7, 2026)

New draft to be submitted to the Office of the Union
by April 5, 2026

Full draft Test Guidelines

Species	Basic Document	Leading Expert(s)	Interested Experts (State / Organization)[3]
*Asparagus (*Asparagus officinalis* L.)	TG/130/5(proj.1)	Ms. Gosia Blokker (NL)	CA, DE, ES, FR, IT, JP, QZ, CLI, Euroseeds, ISF, Office
Garlic (*Allium sativum* L.) (Revision)	TG/162/5(proj.2)	Ms. Chrystelle Jouy (FR)	AU, CN, CZ, ES, IT, JP, KR, NL, QZ, TR, Euroseeds, ISF, Office
*Ginger (*Zingiber officinale* Rosc.) (Revision)	TG/153/4(proj.2)	Mr. Toshiya Kobayashi (JP)	KR, NZ, QZ, Euroseeds, ISF, Office
Vegetable Marrow, Squash (*Cucurbita pepo* L.) (Revision)	TG/119/4 Rev.	Ms. Jutta Taferner-Kriegl (AT)	ES, FR, HU, JP, NL, QZ, ZA, CLI, Euroseeds, ISF, Office
*Parsley (*Petroselinum crispum* (Mill.) Nyman ex A.W. Hill)	TG/136/6(proj.3)	Ms. Swenja Tams (DE)	AU, CN, ES, FR, IT, JP, NL, QZ, TR, Euroseeds, ISF, Office

Partial revisions

Species	Basic Document	Leading Expert(s)	Interested Experts (State / Organization)[3]
*Cucumber, Gherkin (*Cucumis sativus* L.) - addition of resistance to *Cucumber green mottle mosaic virus*	TG/61/7 Rev. 3, TWV/59/12	Ms. Gosia Blokker (NL)	BG, CN, CZ, FR, DE, HU, IT, JP, KR, QZ, RU, CLI, Euroseeds, ISF, Office
*Tomato Rootstocks - *Meloidogyne incognita* (Nematodes): to change the states of expression (same as tomato) and control varieties	TG/294/1 Rev. 5, TWV/59/3	Ms. Cécile Marchenay (NL)	ES, FR, JP, QZ, ZA, CLI, Euroseeds, ISF, Office

[End of Annex IV and of document]

[3] for name of experts, see list of participants