UPOV
International Union for the Protection of New Varieties of Plants

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Technical Working Party for Agricultural Crops **TWA/54/7**

Fifty-Fourth Session
Arusha, United Republic of Tanzania, May 19 to 22, 2025

Original: English
Date: May 22, 2025

REPORT

Adopted by the Technical Working Party for Agricultural Crops

Disclaimer: this document does not represent UPOV policies or guidance

1. The Technical Working Party for Agricultural Crops (TWA) held its fifty-fourth session in Arusha, United Republic of Tanzania, from May 19 to 22, 2025. The list of participants is provided in Annex I to this report.

2. The session was opened by Mr. Ľubomír Bašta (Slovakia), Chairperson of the TWA, who welcomed the participants.

3. The TWA was welcomed by Mr. Stephen Nindi, Deputy Permanent Secretary, Ministry of Agriculture, who welcomed participants.

4. The TWA received a presentation on procedures for DUS Testing in the United Republic of Tanzania by Ms. Dorah Herman Bivugile, Head, DUS Section, Tanzania Official Seed Certification Institute (TOSCI). A copy of the presentation is provided in Annex II of this document.

ADOPTION OF THE AGENDA

5. The TWA adopted the agenda as provided in document TWA/54/1 Rev.

PROCEDURES FOR DUS EXAMINATION

6. The TWA considered documents TWP/9/1 and TWA/54/6.

Guidance and information materials – matters for consideration

TGP Documents

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

7. The TWA 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), with the following proposed amendment to the explanation in item 16:

“(i) ~~A s~~Similar variety(ies) should be indicated. If no similar variety was identified, “none” should be stated.”

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

8. The TWA agreed with the proposal to amend document TGP/7, Guidance Note (GN) 28 “Example Varieties”, as provided in document TWP/9/5, with paragraphs 2.1 and 3.2.2 amended to read as follows:

"2.1 Example varieties enable examiners to see a characteristic in "real life". Specifically, example varieties are required for characteristics ~~when the characteristic is identified as~~ which are important for international harmonization of variety descriptions (asterisked characteristics), ~~is~~ that are influenced by the environment and when a diagram or illustration is not effective demonstrating the states of expression."

"3.2.2 […] Even if example varieties are not obligatory, or cannot be provided for all states of expression, the indication of example varieties for some states of expression can be ~~a~~ of benefit ~~for~~ to examiners, in particular when the same example varieties have already been indicated for other characteristics."

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

9. The TWA 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 TWA/54/3.

10. The TWA agreed that guidance in documents TG/1/3 "General introduction to DUS" and in the Test Guidelines provided sufficient flexibility for authorities to decide when two growing cycles would be required for the expression of characteristics to be considered sufficiently consistent and repeatable in a particular environment.

INFORMATION DATABASES

11. The TWA 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.

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

MOLECULAR TECHNIQUES IN DUS EXAMINATION

Guidelines for the validation of characteristic-specific molecular marker protocol

13. The TWA 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).

14. The TWA agreed that the protocol for characteristic assessment using molecular marker in document TWP/9/4, Section V provided a suitable basis for harmonizing how information should be provided in Test Guidelines.

15. The TWA noted that document TWP/9/4 reported the experiences of France, Italy and the Netherlands (Kingdom of the) validating characteristic-specific molecular markers as alternative methods for the assessment of characteristics in Test Guidelines. The TWA agreed there should be flexibility for different validation types or procedures to be used as the basis for including molecular markers in Test Guidelines.

16. The TWA discussed about access to the methods used in Test Guidelines in relation to the situation described in paragraph 31 ("trade secret protocol") of document TWP/9/4. The TWA agreed that further consideration would be required in case a molecular marker with restricted access would be proposed for inclusion in Test Guidelines.

Reports on existing policies on confidentiality of molecular information

17. The TWA 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.

18. The TWA 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.

19. The TWA noted the reports from the European Union, Germany and the United Kingdom that their domestic policies on plant material and data used in DUS examination covered molecular information. The TWA noted that in the European Union, the technical questionnaire provided the opportunity for applicants to select information to be treated as confidential and that the policy on plant material in DUS testing was available online, as reported in document TWA/54/2 "Reports from members and observers" (see: https://cpvo.europa.eu/en/cpvo-policy-status-plant-material-used-dus-testing-purposes).

20. The TWA noted the reports from Brazil and Canada that no specific policy existed in those countries in relation to confidentiality of molecular information of plant material and data used in DUS examination. The TWA noted that Brazil and Canada did not request DNA based information from applicants.

21. The TWA discussed the possibility of issuing a survey for UPOV members to report on existing policies on confidentiality of molecular information. The TWA agreed that further discussion would be required on the scope and objectives of a survey, such as identifying relevant scenarios for increased engagement in discussions.

Experiences with new types and species

22. The TWA received a presentation on Elephant grass (*Cenchrus purpureus* (Schumach.) Morrone; syn. *Pennisetum purpureum*) from an expert from China. A copy of the presentation would be provided in document TWA/54/2 "Reports on Developments in Plant Variety Protection from Members and Observers".

TEST GUIDELINES

Measures to improve support for drafters of Test Guidelines

23. The TWA considered document TWP/9/3.

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

24. The TWA 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.

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

Notification of Additional Characteristics and States of Expression

Test Guidelines for Barley (document TG/19/11)

26. The TWA considered the following additional characteristics notified by the United Kingdom on the Test Guidelines for Barley (document TG/19/11), which would be included in document TWA/54/2 "Reports on Developments in Plant Variety Protection from Members and Observers":

- Production of pollen (male sterility)
- Seed: Proanthocyanidin content
- Seed: Glycosidic nitrile production

27. The TWA noted that both seed characteristics had been introduced to the United Kingdom national test guidelines recently and had not yet been used in decisions related to the granting of Plant Breeder's Rights.

The TWA agreed to invite the United Kingdom to report the use of the characteristics in DUS examination, at its fifty-fifth session.

28. Following the procedure set out in document TGP/5, Section 10 "Notification of Additional Characteristics and States of Expression", the TWA agreed that the characteristic "Production of pollen (male sterility)" should be posted on the TG Drafters' webpage of the UPOV website (see: https://www.upov.int/resource/en/tg_drafters.html).

Test Guidelines for Oilseed Rape (document TG/36/7)

29. The TWA considered the following additional characteristics notified by the United Kingdom on the Test Guidelines for Oilseed Rape (document TG/36/7), which would be included in document TWA/54/2 "Reports on Developments in Plant Variety Protection from Members and Observers":

- Cotyledon: length from lamina base to widest point (lbtwp)
- Cotyledon: lbtwp/width ratio
- Herbicide Tolerance: Imazamox

30. Following the procedure set out in document TGP/5, Section 10 "Notification of Additional Characteristics and States of Expression", the TWA agreed that the characteristics should be posted on the TG Drafters' webpage of the UPOV website (https://www.upov.int/resource/en/tg_drafters.html).

Technical Questionnaire, section 4.2: "Method of propagating the variety"

31. The TWA 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 of agricultural crops where no structured information (open text box) was provided in Section 4.2 ("method of propagating the variety").

32. The TWA agreed that certain options were not applicable and should not be included in the Technical Questionnaires. The TWA noted the expression of interest of the United Kingdom to revise the list of options for the Test Guidelines of agricultural crops and agreed to consider the revised proposal at its fifty-fifth session.

Discussions on draft Test Guidelines

Full draft Test Guidelines

*Bent (*Agrostis canina* L., *Agrostis gigantea* Roth, *Agrostis stolonifera* L., *Agrostis capillaris* L.) (Revision)

33. The TWA discussed document TG/30/7(proj.2) presented by Mr. Peter Hendriks (Netherlands (Kingdom of the)), and agreed the following:

<table>
<tr><td>Cover page</td><td>- main common name to read "Bent Grass"
- to delete synonyms of botanical names in table with alternative names</td></tr>
<tr><td>3.4</td><td>to invert order of paragraphs</td></tr>
<tr><td>Char. 2</td><td>to add (*)</td></tr>
<tr><td>Char. 3</td><td>- to have the following states, notes and example varieties:
<table>
<tr><td>very short</td><td></td><td>1</td></tr>
<tr><td>short</td><td>Flagstick (As), Teetop (Acap)</td><td>2</td></tr>
<tr><td>medium</td><td>777 Triple Seven (As)</td><td>3</td></tr>
<tr><td>tall</td><td>Manor (Acap), PC2 (As)</td><td>4</td></tr>
<tr><td>very tall</td><td></td><td>5</td></tr>
</table>
- to add explanation to read "Observation should be made on the average height of the foliage in the centre of the plant."</td></tr>
</table>

<table>
<tr><td>Char. 5</td><td>- to add MS/A
- to have the following states, notes and example varieties:<table><tr><td>very narrow</td><td></td><td>1</td></tr><tr><td>narrow</td><td>Arrowtown (Acap)</td><td>2</td></tr><tr><td>medium</td><td>Barking (Acap), Tyee (As)</td><td>3</td></tr><tr><td>broad</td><td>Macdonald (As), Manor (Acap)</td><td>4</td></tr><tr><td>very broad</td><td></td><td>5</td></tr></table></td></tr>
<tr><td>Char. 6</td><td>to delete underlining of “without”</td></tr>
<tr><td>Char. 8</td><td>- to have the following states, notes and example varieties:<table><tr><td>very short</td><td></td><td>1</td></tr><tr><td>short</td><td>Heriot (Acap)</td><td>2</td></tr><tr><td>medium</td><td>Tyee (As)</td><td>3</td></tr><tr><td>tall</td><td>Grasslands Sefton (Acap)</td><td>4</td></tr><tr><td>very tall</td><td></td><td>5</td></tr></table>- to remove underlining of “vernalization”</td></tr>
<tr><td>Ad. 6</td><td>second sentence to read “Observations should be made at one occasion…”</td></tr>
<tr><td>Ad. 11</td><td>to read “The flag leaf is the leaf directly below the inflorescence. Length and width should be observed on the same leaf.
Observations should be made from the tip of the leaf blade to the leaf sheath.”</td></tr>
<tr><td>Ad. 12</td><td>to add “Observations should be made at the widest point of the leaf blade.”</td></tr>
<tr><td>Ad. 14</td><td>to read “Observations should be made on the longest stem from ground level to the tip of the inflorescence, when the inflorescence is fully expanded.”</td></tr>
<tr><td>8.3</td><td>DC 47 to read “Flag leaf sheath opening”</td></tr>
<tr><td>TQ 4.1</td><td>to have full breeding scheme including request for parent varieties</td></tr>
<tr><td>TQ 4.2.2</td><td>to be deleted</td></tr>
<tr><td>TQ 6</td><td>to replace note 3 with “short” and note 5 with “medium”</td></tr>
</table>

*Festulolium (×*Festulolium* Asch. et Graebn.) (Revision)

34. The TWA discussed document TG/243/2(proj.2) presented by Ms. Lydie Cechová (Czech Republic), and agreed the following:

1.	to delete wording in brackets
3.4.1, 3.4.2	to be deleted
6.5	to add “A, B, C - see Chapter 3.3.3”
Char. 2 to 8	remove underlining of “vernalization”
Char. 4, 7	to delete “PROPOSED TO BE DELETED” and keep characteristic
Char. 10	to add (*)
Char. 16	to add (*)
8.1 (b)	to be deleted (moved to Ad. 12 and 13)
Ad. 9	- to add “A:” before “Plots with spaced plants” and “B:” before “Row plots” - to delete (1) to (4) before growth stages
Ad. 12	to add “The flag leaf is the leaf directly below the inflorescence. Length and width should be observed on the same leaf.”
Ad. 13	to add “See Ad. 12”
Ad. 14	to read “Observations should be made on the longest stem from ground level to the tip of the inflorescence, when the inflorescence is fully expanded.”
8.3	DC 47 to read “Flag leaf sheath opening”
TQ 4.2.	- to delete “Other” from 4.2.1 and have a tick box for seed-propagated varieties - to delete 4.2.2

*Fodder Beet (*Beta vulgaris* Fodder Beet Group) (Revision)

35. The TWA discussed document TG/150/4(proj.3) presented by Ms. Anne-Lise Corbel (France), and agreed the following:

4.2.3	to be deleted

4.2.5	last two sentences to read “For ploidy, a population standard of 10% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 15 plants, 1 off-type is allowed.”
6.5	To add “A, B see chapter 4.2.4”
Table of chars.	to check name of example variety “Jaune d'Eckendor” (to read Eckendorf?)
Char. 3	- to check whether white exists - to check whether to merge pink, red and red purple
Char. 4	- to add (*) - to add example varieties
Char. 6	to have the following states, notes and example varieties: absent or weak — Perrine — 1 medium — Bergman — 2 strong — Laurena KWS — 3
Char. 8, 11	to add (*)
Char. 12	to be indicated as QN
Char. 13, 14	to have more similar example varieties in both characteristics
Char. 14	to add (*)
Char. 15	- state 2 to read “ellipsoid” - state 3 to read “broad obovoid” - state 5 to read “narrow obconic” - state 8 to read “medium oblong”
Char. 18	to add (*)
Char. 19, 20	to be moved before 15
Char. 20, 21	to check colors
Char. 22	- to check whether to add example varieties - to check whether to recalibrate the scale - to add (*)
Ad. 2	- to add new first sentence to read “Observation should be made by standard cytological methods.” - current first sentence to read “Observations should be made on at least 5 plants.”
Ad. 19	to read “Observations should be made on the roots by assessing the height above the soil, without harvesting.”
8.2	- title to read “Growth stage of *Beta vulgaris* L. adapted to the BBCH scale (Meier U., 1993)” - growth stages 30, 33, 39: to delete space before % - to delete principal growth stage 5
TQ 4.2.	- to delete “Other” from 4.2.1 and have a tick box for seed-propagated varieties - to delete 4.2.2
TQ 5.	to remove 5.3 (char. 3)
TQ 6.	to replace “obconic” with “narrow obconic”

Grain Amaranth (*Amaranthus* L.) (Revision)

36. The TWA discussed document TG/247/2(proj.2) presented by Mr. Ľubomir Basta (Slovakia), and agreed the following:

Cover page	- to check coverage of TG (specific species for which applications have been filed instead of whole genus) - to confirm the exclusion of ornamental varieties with TWO - to check whether to common name to read “Amaranth”
1.	- to delete “and its hybrids” - to check whether to add ASW 0 (“In the case of ornamental varieties, in particular, it may be necessary to use additional characteristics or additional states of expression to those included in the Table of Characteristics in order to examine Distinctness, Uniformity and Stability.”)
4.2.3	to be deleted
5.3	- to check whether to reduce number of grouping characteristics - to remove characteristic 18 from grouping characteristics
Char. 1	to check whether to be indicated as QN
Char. 2	to check whether to reduce scale to 5 notes

Char. 8, 10, 17	to clarify in the title of the characteristics that the leaves are observed at different stages
Char. 8, 9, 17, 18, 19, 20, 21	to review all leaf color characteristics (approach of main and secondary colors and their distribution) and group them together
Char. 9	to separate states 1 and 3 (referring to anthocyanin) from state 2
Char. 21	to check whether to be deleted (is there enough experience?)
Char. 22	- to change order of colors according to TGP/14 - state 3 to read "purple green"
8. 1 (a)	to be checked whether reference to middle part is appropriate for growth stage 13
Ad. 9	to be deleted
Ad. 19, 21	to clarify what the blotch is (only white part or does it include dark part)
Ad. 26	to delete references to a and be at the bottom of the explanation
Ad. 36	to read "…, it is a flint type seed; if the light is not transmitted, it is a floury type seed."
TQ 1.	to delete individual species and have free text box for indication of species (1.3 to read "Species (please indicate):"
TQ 4.2.1	to delete "Cross-pollination" and "Hybrid"
TQ 4.2.2	to be deleted
TQ 6.	to replace example with QN characteristic
TQ 7.	to add ASW 16 (representative color photograph to be provided)

Mung Bean (*Vigna radiata* (L.) R. Wilczek)

37. The TWA discussed document TG/VIGNA_RAD(proj.3), presented by Ms. Lixia Wang, on behalf of the Leading Expert, Mr. Xiongfei Jiao (China), and agreed the following:

3.1.2	to be deleted
Table of chars.	to add example varieties
Char. 1	to be presented as a QN characteristic and have three states of expression
Char. 2	to delete growth stage (covered by Ad. 2)
Char. 7	to be presented as a QN characteristic and have three states of expression
Char. 9	- to check whether to add or replace with corolla anthocyanin - to clarify this state of expression "blend"
Char. 10	to be presented as a QN characteristic and have three states of expression
Char. 11	to delete growth stage (time of observation indicated in Ad. 11)
Char. 14, 17, 19	to check whether to add VG
Char. 20	to check whether to read "Pod: degree of curvature", to have states "absent or weak", "medium", "strong" and to be indicated as QN
Char. 21	to be deleted
Char. 25	- to check wording of states of expression 2 and 3 - to check whether there is a continuous range and to be indicated as QN
Char. 26	to check the number of states (only four states in Ad. 26)
Char. 27	- to check whether to be presented as a QN characteristic and have three states of expression - to check whether to add explanation as in TG Soya Bean
8.1 (a)	to check whether to read "Observations should be made on the upper half of the main stem."
8.1 (b)	to check whether to read "Observations should be made on lateral leaflets of compound leaves at segments 8 to 10 on the upper half of the plant."
8.1 (c)	to read "Observations should be made on the pod in the upper part of the plant."
Ad. 1	- to correct typo in "Seedlings" - to be improved (reference to intense sunlight is not specific enough, differs according to the region, more standardized wording to be used) - to check whether to harmonize with explanation in TG Soya Bean
Ad. 4	- to correct spelling of "week" in state 1 - to improve resolution of photographs
Ad. 5	states of expression to read as in characteristic 5
Ad. 11	to read "The time of maturity is reached when 50% of pods are mature and the seeds are hard."
Ad. 12	last point for semi-determinate varieties to read "The terminal leaf is smaller than the lower leaves in growth stage 60."

Ad. 19	to be deleted
Ad. 25	to delete upper rows of photographs
Ad. 26	to be deleted (illustration for color)
8.3	- to check whether growth stages to read: Code / Growth stages 10 Seedling 20 Beginning of flowering 30 Full flowering 40 Advanced ripening 50 Fully ripe - growth stage 40 to read "50% of the pods are mature and the seeds are hard" - growth stage 50 to read "More than 90% of the pods in the cell are mature and the seeds are hard" - to check whether characteristics assessment match the growth stages as defined above
TQ 4.2	to be completed (add seed-propagation)
TQ 6.	to add example

*Sugarcane (*Saccharum* L.) (Revision)

38. The TWA discussed document TG/186/2(proj.6), presented by Mr. Muhammad Ali Bhatti (Australia), and agreed the following:

2.3	to read "…12 segments of culm with at least 3 buds each."
3.4	to add ASW 6 "The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle."
4.1.4	to delete last sentence
Table of chars.	to check order of characteristics following the changes to characteristic titles
Char. 6	to add (a)
Char. 7	to check whether to find names of shapes according to TGP/14 for states 2 and 3
Char. 9	to be deleted
Char. 10	- to add (d) - to check whether to have the following states and add example varieties: greenish white yellowish green green greenish yellow yellow orange red yellowish purple purple brown
Char. 11	to delete (a)
Char. 13	- to read "Culm: degree of zigzag" - to be moved after char. 4
Char. 14	to be moved before char. 10
Char. 15	to read "Internode: depth of bud groove"
Char. 16	to add explanation "Observation or measurements should be made in the opposite side to the bud."
Char. 17	- to be indicated as QN - to invert order of states 1 and 2 and do the same with the illustrations in Ad. 17
Char. 18	to check whether to add new char. "Node: width of growth ring" with 5 notes from "absent or very narrow" to "very broad", to be indicated as MS/VG
Char. 19	to be deleted
Char. 20	to read "Bud: shape"
Char. 21, 22	to be deleted
Char. 23	to read "Bud: prominence"
Char. 26	- to read "Bud: width of wing" - state 1 to read "absent or very narrow"

Char. 27	- to read “Node: color of root band” - to add (d) - to check whether to have the following states and add example varieties: greenish white yellowish green green greenish yellow yellow orange red yellowish purple purple brown
Char. 28	- to read “Node: color of growth ring” - to add (d) - to check whether to have the following states and add example varieties: greenish white yellowish green green greenish yellow yellow orange red yellowish purple purple brown
Char. 31, 33, 35, 37	to be deleted
Char. 38, 41	- to delete (*) - to read “Leaf sheath: curvature of…” and to adjust states accordingly - to be indicated as QN
Char. 39	- to read “Leaf sheath: size of underlapping auricle” - state 1 to read “absent or very small”
Char. 40	to be deleted
Char. 42	state 1 to read “absent or very small”
8.1 (a)	- to delete last sentence - illustration to become an explanation covering all characteristics at the beginning of chapter 8.1 and check from which characteristics to delete (a) - to improve situation of bud in illustration (to be in root band)
8.1 (d)	to read “Observations should be made on the color covering the largest area on the part of the culm not exposed to the sun after removal of the leaves and removal of the wax.”
Ad. 10	to be deleted
Ad. 27, 28	to be deleted
Ad. 30	to check whether to only indicate hair groups 57 and 60, 61 in the illustration

Partial revisions

*Maize (*Zea mays* L.)

39. The TWA discussed document TWV/58/4-TWA/53/4, presented by Mr. Wim Sangster (Kingdom of the Netherlands), and noted that the TWV had agreed the following (see document TWV/58/11 “Report”, paragraphs 68 and 69):

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)

40. The TWA agreed the following:

Char. 24.1, 24.2	to display all 9 notes to keep (*)
Char. 38, New Char. after 38	to replace “blue black” with “bluish black”

Sweet Potato (*Ipomoea batatas* (L.) Lam.)

41. The TWA discussed document TWA/54/4, presented by Mr. Toru Watanabe (Japan), and agreed the following:

New char. 17	to review next year after more experience has been gained by other members
Char. 23	state 1 to read “none”

Recommendations on draft Test Guidelines

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

42. The TWA agreed that the following draft Test Guidelines should 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 comments in this report:

Full draft Test Guidelines

Subject	Basic Document(s) (2025)
*Bent (*Agrostis canina* L., *Agrostis capillaris* L., *Agrostis gigantea* Roth, *Agrostis stolonifera* L.,) (Revision)	TG/30/7(proj.2)
*Festulolium (×*Festulolium* Asch. et Graebn.) (Revision)	TG/243/2(proj.2)

Partial revision

Subject	Basic Document(s) (2025)
*Maize (*Zea mays* L.) - Characteristics 24.1 and 24.2 - Revision of characteristics “Only varieties with ear type of grain: sweet, pop or waxy: Ear: number of colors of grains” and “Ear: main color of top of grain" - Addition of new characteristics “Ear: secondary color of grain” - Addition of characteristic to TQ 5	TG/2/7, TWV/59/5-TWA/54/5

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

43. The TWA agreed to discuss the following draft Test Guidelines at its fifty-fifth session:

Full draft Test Guidelines

Subject	Basic Document(s) (2025)
*Fodder Beet (*Beta vulgaris* Fodder Beet Group) (Revision)	TG/150/4(proj.3)
*Grain Amaranth (*Amaranthus* L.) (Revision)	TG/247/2(proj.2)
*Mung Bean (*Vigna radiata* (L.) R. Wilczek)	TG/VIGNA_RAD(proj.3)
*Sugarcane (*Saccharum* L.) (Revision)	TG/186/2(proj.6)
White Clover (*Trifolium repens* L.)	TG/38/7

White Mustard (*Sinapis alba* L.) (Revision)	TG/179/3

Partial revisions

Subject	Basic Document(s) (2025)
Sweet Potato (*Ipomoea batatas* (L.) Lam.) - Adding a new characteristic “Leaf blade: anthocyanin coloration of nectary” - Adding a new shape to “Storage root: shape” - Adding new colors to “Storage root: main color of flesh” - Revision of example variety for char. 23	TG/258/1, TWA/54/4

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

(c) Test Guidelines for possible future discussions

45. The TWA agreed that it should consider the development of Test Guidelines for the following at a future session:

Subject	Basic Document(s) (2025)
Common Millet (*Panicum miliaceum* L.) (Revision)	TG/248/1
Couch Grass, Bermuda Grass (*Cynodon* Rich.)	New
Tall Fescue (*Festuca pratensis* Huds. / *Festuca arundinacea* Schreb.)	TG/39/8
Turnip Rape (*Brassica rapa* L. var. *silvestris* (Lam.) Briggs.) (Revision)	TG/185/3

(d) Participation in discussions of Test Guidelines from other TWPs

46. The TWA agreed to propose that the following experts be added as interested experts to the following draft Test Guidelines being discussed by the Technical Working Party for Vegetable Crops (TWV), subject to the deadlines agreed in the report of the fifty-ninth session of the TWV:

Subject	Interested experts (countries/organizations) [1]
Vegetable Marrow, Squash (*Cucurbita pepo* L.) (Revision)	QZ, ARIPO, CLI, Euroseeds

MATTERS FOR INFORMATION

Reports on developments in plant variety protection from members and observers

47. The TWA noted the information on developments in plant variety protection from members and observers provided in document TWA/54/2 Prov. The TWA noted that reports submitted to the Office of the Union after May 2, 2025, and until May 23, 2025, would be included in the final version of document TWA/54/2.

Reports on developments in UPOV

48. The TWA 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

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

(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
(viii) Revision of TGP Documents in 2024
(ix) Revision of Information Documents in 2024
(x) Revision of Explanatory Notes on Variety Denominations (new denomination class for Prunus)
(xi) Discussion on disease resistance characteristics in DUS examination
(xii) Matters arising from the Technical Working Parties
(xiii) Organization of the 2025 Seminar on cooperation with breeders in DUS examination
(xiv) Measures to improve support provided for DUS examination

DATE AND PLACE OF THE NEXT SESSION

49. The TWA noted that no invitations for the venue of its fifty-fifth session had been received. The TWA noted that a decision on the date and place of its next session would be taken by the Council, at its fifty-ninth session, to be held on October 24, 2025.

50. The TWA agreed that UPOV members could contact the Office of the Union with offers of date and place to host the next TWA session until August 31, 2025.

51. The TWA agreed that its fifty-fifth session should be held via electronic means, from June 15 to 18, 2026, if no alternative offer was received from a member of the Union.

FUTURE PROGRAM

52. The TWA agreed that documents for its fifty-fifth session should be submitted to the Office of the Union by May 1, 2026. The TWA 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.

53. The TWA proposed to discuss the following items at its next session:

1. Opening of the session
2. Adoption of the agenda
3. Procedures for DUS examination (presentations invited)
4. Technical Questionnaire, section 4.2: “Method of propagating the variety” (document to be prepared by the United Kingdom)
5. Variety description databases (presentations invited)
6. Image analysis and new technologies in DUS examination (document to be prepared United Kingdom and presentations invited)
7. Molecular techniques in DUS examination (presentations from Italy, the United Kingdom and presentations invited)
8. Reports on existing policies on confidentiality of molecular information (presentations invited)
9. Using the COYU-Splines method in DUS examination (presentation from the United Kingdom and presentations invited)
10. Experiences with new types and species (oral reports invited)
11. Experiences and notification of additional characteristics or states of expression (reports invited)
12. Discussion on draft Test Guidelines (Subgroups)
13. Recommendations on draft Test Guidelines
14. Date and place of the next session
15. Future program
16. Adoption of the Report on the session (if time permits)

Matters for information

17. Reports from members and observers (written reports to be prepared by members and observers)

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

19. Closing of the session

VISIT

54. On Wednesday, May 21, 2025, the TWA visited the Tanzania Coffee Research Institute (TaCRI). The TWA was welcomed by Mr. Jeremiah Magesa, Acting Chief Director , TaCRI, who welcomed the TWA and introduced TaCRI activities. Since its foundation in 2000, TaCRI developed 23 new protected coffee varieties. The TWA visited the TaCRI variety demonstration field and was welcomed by Mr. Nuhu Aman and Ms. Grace Monyo, Plant Breeders, TaCRI, who explained the breeding of coffee varieties. The TWA visited the TaCRI nursery, guided by Ms. Twisege Mwakabuta, Research Officer, TaCRI, who also explained the different methods of propagating coffee varieties. The TWA visited the variety collection and different test sites within the TaCRI campus.

55. The TWA adopted this report at the close of its session.

[Annex I follows]

ANNEX I

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[Annex II follows]

PROCEDURES FOR DUS TEST IN THE UNITED REPUBLIC OF TANZANIA

Technical Working Party for Agricultural Crops, The Fifty fourth Session

Ms. Dorah H. Bivugile

UPOV

INTRODUCTION

- Tanzania Official Seed Certification Institute (TOSCI) is a Tanzanian Government Institution under the Ministry of Agriculture (MoA) established under the Seeds Act No. 18 of 2003 amended in 2014, 2020 and its Regulations of 2007 amended in 2017, 2020.
- The major responsibility of the Institute;
  - ✓ To certify and promote use of agricultural seeds.
  - ✓ To safeguard farming community from procuring poor quality Seeds (fake seeds) from vendors of farm inputs.

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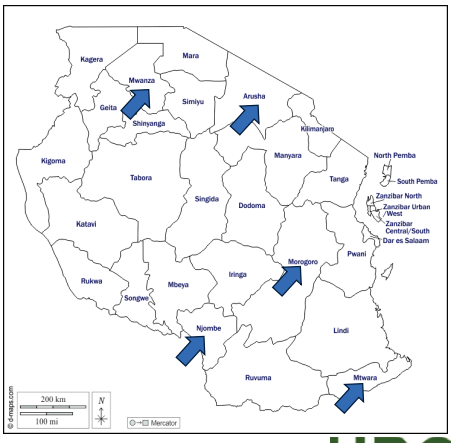
INTRODUCTION

- TOSCI's headquarter is in **Morogoro** and it has four Zonal centres distributed throughout the country
  - ➢Arusha – *Northen zone*
  - ➢Mwanza – *Lake zone*
  - ➢Njombe – *Southern highlands*
  - ➢Mtwara – *Southern*



DUS TEST IN THE UNITED REPUBLIC OF TANZANIA

- **Distinctness**, **Uniformity** and **Stability** (DUS) test is one of the TOSCI mandate given by the provisions in the Seed regulations of 2007 and 2017 under the Seed Act of 2003.
  - ✓No variety shall be released in the United Republic of Tanzania unless it has passed DUS test, evaluated through the National Performance Trial and recommended for release by the National Seed Committee, except for vegetable variety which may be released after it has passed DUS tests (Regulation 4(1))
  - ✓The United Republic of Tanzania may accept DUS test results from a recognized authority or organization of any country which is in agreement with the United Republic of Tanzania on seed regulation and/quality control (Regulation 4(1))

DUS TEST IN THE UNITED REPUBLIC OF TANZANIA

- All DUS test procedures in the United Republic of Tanzania are in accordance with UPOV Test Guidelines

- It is performed by TOSCI for the purpose of;
  - Variety protection and
  - Commercialization (National Variety Listing)

- TOSCI performs DUS testing for all genera and species of varieties which are intended to be registered in the United Republic of Tanzania

Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- Requirements:

  ✓DUS application form (online filling through TOAS)

  ✓Sufficient seed sample for DUS test (UPOV TG)

  ✓Variety description & Technical Questionnaire (UPOV TG)

  ✓Variety name (UPOV TG)

  ✓DUS testing fees

Options for DUS Testing in the United Republic of Tanzania

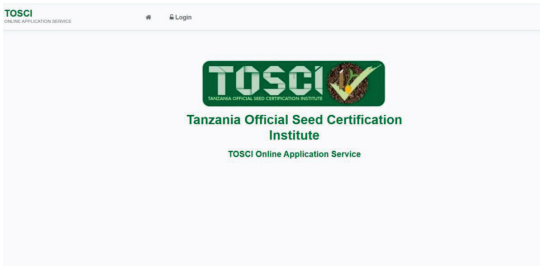
A: Conducting DUS Test in the United Republic of Tanzania

- Application process:
  - ✓Application is done online through TOSCI Online services (TOAS)
  - ✓Time of application: applications are submitted all year round but DUS TEST is performed in the appropriate season
  - ✓Planting materials: are sent to Morogoro HQ, other TOSCI Branches or Direct to field/On-site

Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- Administrative matters:
  - ✓Checking on the submitted documents
  - ✓Availability of resources
  - ✓Availability of expertise
  - ✓Availability of check varieties
  - ✓Payment confirmation



Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- Organizing DUS Test:
  - ✓Mostly DUS test is conducted at TOSCI premises (On-station)
  - ✓DUS Test can be done at applicant's fields if;
    - ➢ Special conditions available at applicants' field are needed for the test
    - ➢ When the crop under the test is new (sharing of expertise is needed)

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Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- Objectives of DUS Test:
  - ✓DUS test is done to determine whether;
    - ➢ A newly bred variety differs from existing varieties within the same species (D)
    - ➢ Whether the characteristics used to establish Distinctness are expressed uniformly (U)
    - ➢ These characteristics do not change over subsequent generations (S)

UPOV

Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- Materials to be included in the test:
  - ✓Candidate varieties – varieties to be tested for DUS
  - ✓Reference varieties
    - ✓ Example varieties
    - ✓ Varieties for comparison (Similar varieties)

Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- Design of the test:
  - ✓Two independent growing cycles
  - ✓Layout: Candidate variety and reference varieties are put closer for easy comparison
  - ✓Spacing: Allow each plant to be assessed freely, allowing removal of plants or parts of plants
  - ✓Consider number of plants required in a test /parts of plants to be examined
  - ✓Replications: If resources allows
  - ✓There is no randomization

Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- DUS test lay out:
  - ✓Two replications (No. of rows and plants per plot depends on Crop species)
  - ✓Example: 9 varieties DUS test Layout

V1	V3	V4
V2	V2	V5
V3	V1	V6
V4	V9	V7
V5	V8	V8
V6	V7	V9

UPOV

Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- **Data Collection**
  - ✓Collection of data (Characters, recording details and instructions) is done following UPOV Test Guidelines and National DUS test guidelines which were domesticated from UPOV Test Guidelines by adding example variety.
  - ✓Any variant, diseased and abnormal plants or plants resulting from an adverse reaction to husbandry practice are recorded but excluded from the sample

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Options for DUS Testing in the United Republic of Tanzania

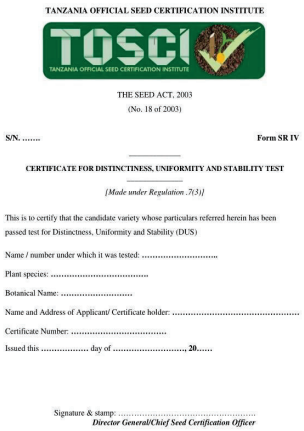
A: Conducting DUS Test in the United Republic of Tanzania

- **Participation of the Applicant**
  - ✓Applicant is invited from the beginning of the trial to observe the performance the candidate variety
- **DUS Test reports**
  - ✓Interim report – *written at the end of the first growing cycle*
  - ✓Final report – *written at the end of the second growing cycle*
  - ✓The report is submitted for decision making for certificate issuing.

Options for DUS Testing in the United Republic of Tanzania

A: Conducting DUS Test in the United Republic of Tanzania

- **Issuing DUS test Certificates**
  - ✓If the candidate variety pass DUS test; the applicant is notified followed by issuing DUS test Certificate.



TANZANIA OFFICIAL SEED CERTIFICATION INSTITUTE

THE SEED ACT, 2003
(No. 18 of 2003)

S/N. ..... Form SR IV

CERTIFICATE FOR DISTINCTNESS, UNIFORMITY AND STABILITY TEST

[Made under Regulation .7(3)]

This is to certify that the candidate variety whose particulars referred herein has been passed test for Distinctness, Uniformity and Stability (DUS)

Name / number under which it was tested: .....

Plant species: .....

Botanical Name: .....

Name and Address of Applicant/ Certificate holder: .....

Certificate Number: .....

Issued this ..... day of ....., 20.....

Signature & stamp: .....
Director General/Chief Seed Certification Officer

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Options for DUS Testing in the United Republic of Tanzania

B: Take Over DUS Test report

- The applicant inform TOSCI of the country and address of the authority where the variety was DUS tested
- TOSCI request the DUS report and descriptor from the stated authority
- The authority send the report and descriptor direct to TOSCI
- TOSCI informs the applicant and the candidate variety is proposed for variety listing (Vegetables) and VCU (field crops).

Number of DUS Tested Varieties/Registered varieties

2003 - 2024	DUS Tested	Take Over	National Listing
Agricultural crops	637	41	678
Vegetables	398	56	451
TOTAL	**1,035**	**97**	**1,129**


Mt. Kilimanjaro


Zanzibar spices

THANK YOU


Zanzibar island


Ngorongoro

[Annex III follows]

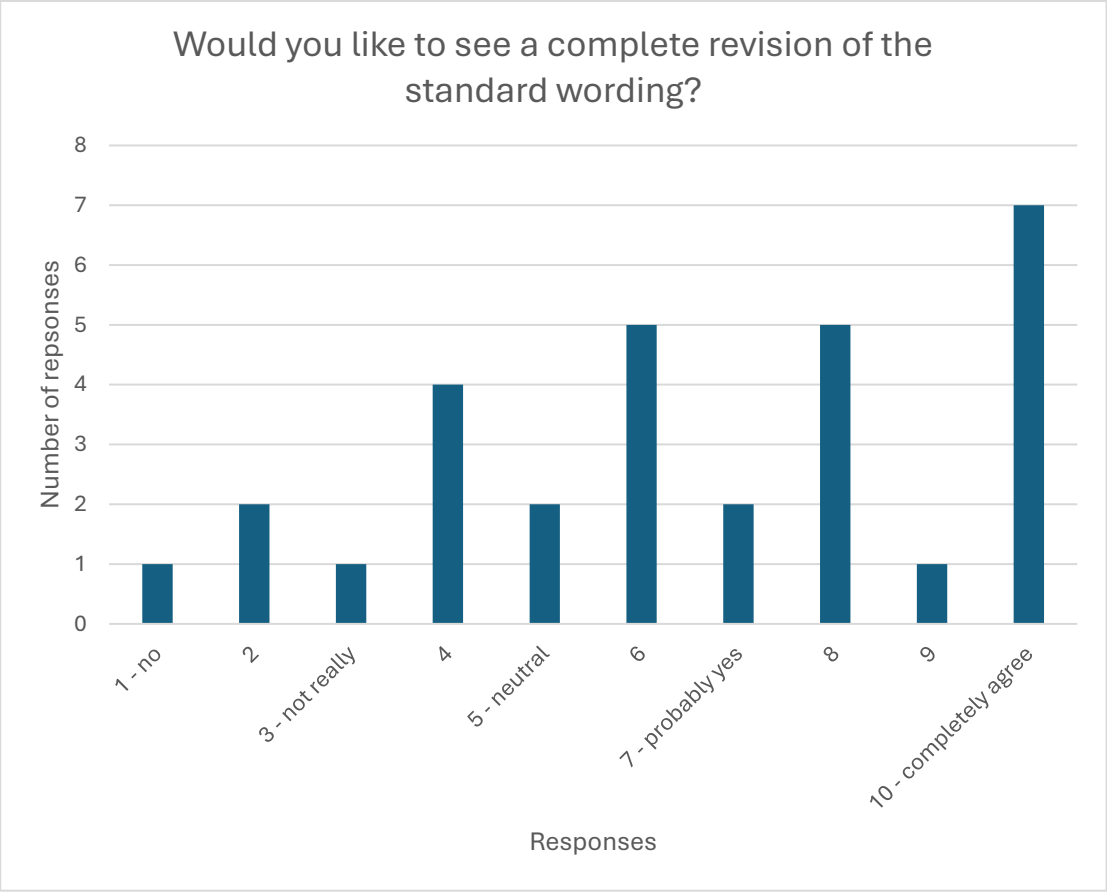
ANNEX III

TC SUB-GROUP ON TEST GUIDELINES

Summary of the discussion at the 54th Session of the TWA.

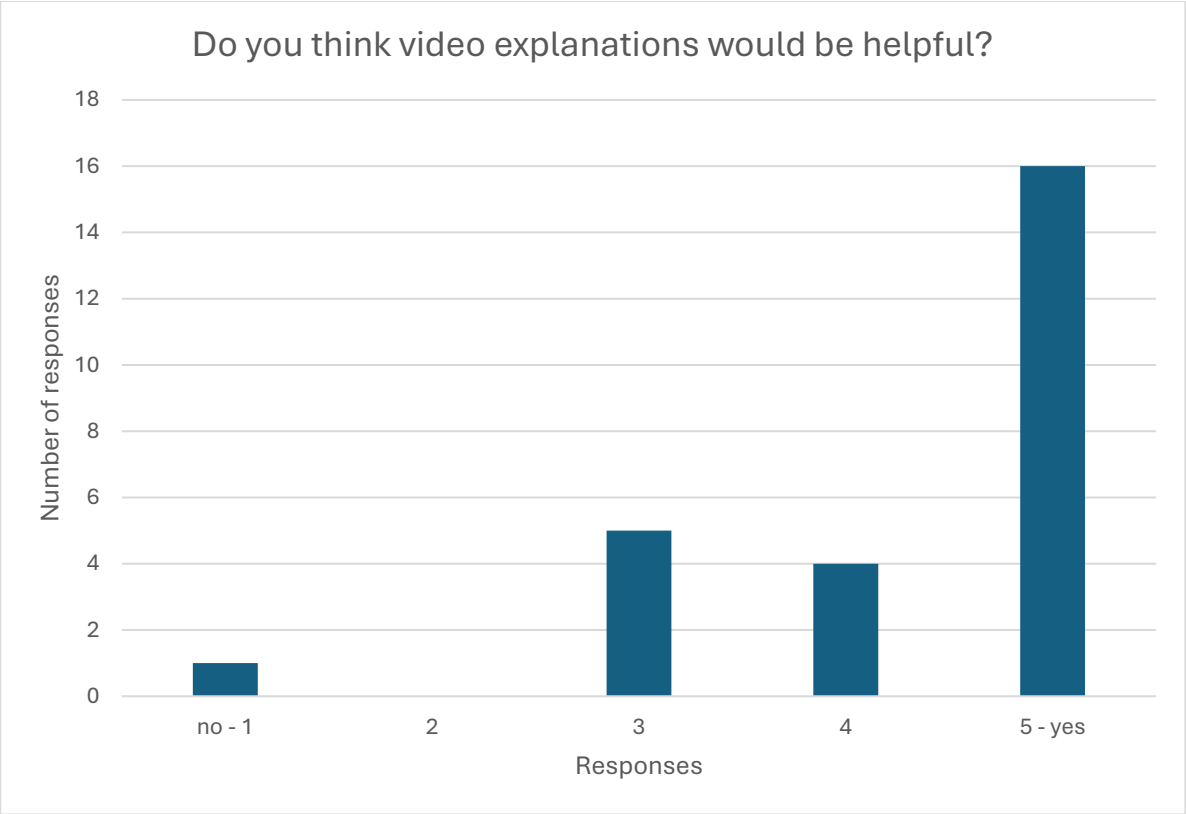
The TWA received a presentation from the leading expert of the subgroup, Margaret Wallace (United Kingdom), a copy of which is provided in document TWP/9/3. The group also submitted responses to an online questionnaire. There was limited time for a discussion so the opinions of the TWA are captured in the responses to the questionnaire only.

A summary of the responses follows:



The Group had mixed views on the complete revision of the standard wording.

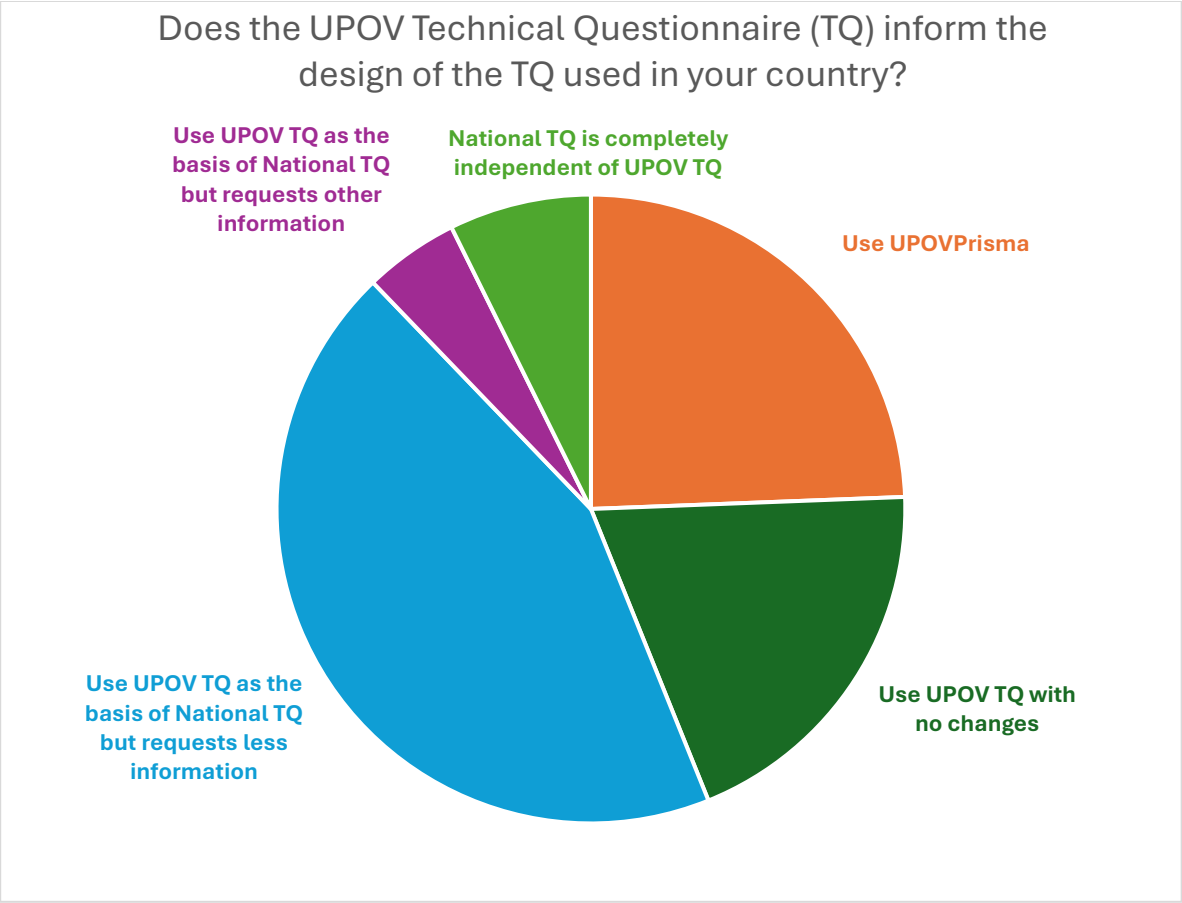
Of the 33 responses to the questionnaire, 23 said that they do print the Test Guidelines. Of those who print, 17 stated that they print the entire document, and six said they only print part(s) of the document, with the table of characteristics (section 7) and associated explanations (section 8) being the most printed section of the Test Guidelines. One respondent indicated that they print the entire document except the TQ and Annex.



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

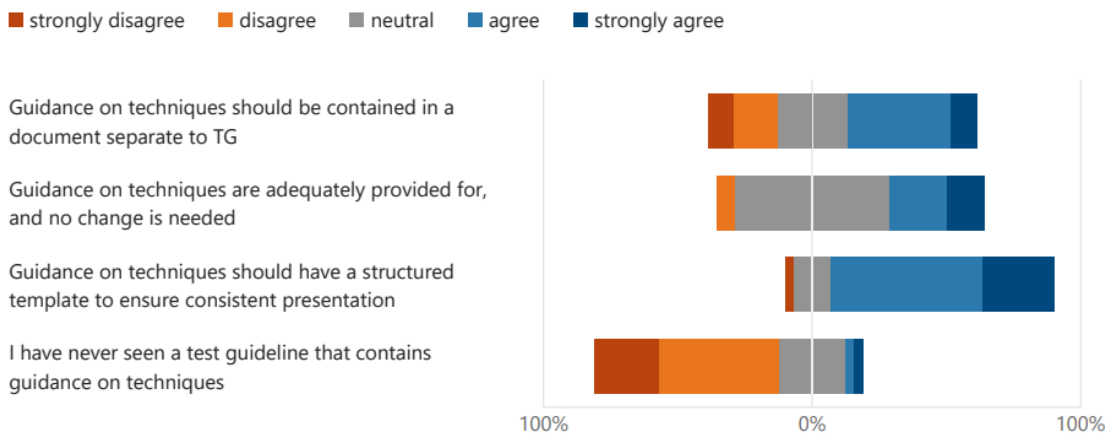
The questionnaire included questions related to the use of the UPOV Technical Questionnaires.

47% of the Group felt that the Technical Questionnaire could be a separate document from the Test Guideline, while 28% indicated the preference that it should remain part of the Test Guideline. The remaining responses were unsure and would have to check (25%).



There was a request to improve text regarding homogeneity which is an issue for many breeders.

The TWA Group mostly agreed that there should be a template for the description of methods included in the Test Guidelines. The group did not agree on whether the guidance should be contained in a document separate to the Test Guidelines.



Follow-up actions

This summary will be collated with those from discussions at the 2025 sessions of the TWO, TWV, 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)
United Kingdom

[Annex IV follows]

ANNEX IV

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 July 4, 2025

Full draft Test Guidelines

Species	Basic Document(s)	Leading expert
*Bent (*Agrostis canina* L., *Agrostis capillaris* L., *Agrostis gigantea* Roth, *Agrostis stolonifera* L.,) (Revision)	TG/30/7(proj.2)	Mr. Peter Hendriks (NL)
*Festulolium (×*Festulolium* Asch. et Graebn.) (Revision)	TG/243/2(proj.2)	Ms. Lydie Cechová (CZ)

Partial revision

Species	Basic Document(s)	Leading expert
*Maize (*Zea mays* L.) - Characteristics 24.1 and 24.2 - Revision of characteristics “Only varieties with ear type of grain: sweet, pop or waxy: Ear: number of colors of grains” and “Ear: main color of top of grain" - Addition of new characteristics “Ear: secondary color of grain” - Addition of characteristic to TQ 5	TG/2/7, TWV/59/5-TWA/54/5	Ms. Cécile Marchenay (NL)

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWA/54
(* indicates possible final draft Test Guidelines)

Guideline date for Subgroup draft to be circulated by Leading Expert: **March 6, 2026**
Guideline date for comments to Leading Expert by Subgroup: **April 3, 2026**

New draft to be submitted to the Office of the Union
before May 1, 2026

The procedure for the introduction and revisions of Test Guidelines is provided in document TGP/7 "Development of Test Guidelines", Section 2

Full draft Test Guidelines

Species	Basic Document	Leading expert	Interested experts (countries/organizations)[2]
*Fodder Beet (*Beta vulgaris* Fodder Beet Group) (Revision)	TG/150/4(proj.3)	Ms. Anne-Lise Corbel (FR)	DE, DK, ES, GB, JP, QZ, RO, ZA, CIOPORA, Euroseeds, ISF, Office
*Grain Amaranth (*Amaranthus* L.) (Revision)	TG/247/2(proj.2)	Mr. Ľubomir Basta (SK)	TWO, DE, FR, HU, IT, JP, KE, NZ, QZ, ZA, CIOPORA, Euroseeds, ISF, Office
*Mung Bean (*Vigna radiata* (L.) R. Wilczek)	TG/VIGNA_RAD (proj.3)	Mr. Xiongfei Jiao (CN)	AR, AU, BR, FR, JP, KE, KR, QZ, TZ, CIOPORA, Euroseeds, ISF, Office
*Sugarcane (*Saccharum* L.) (Revision)	TG/186/2(proj.6)	Mr. Ali Bhatti (AU)	AR, BR, CN, DE, JP, KE, QZ, TZ, ZA, CIOPORA, ISF, Office
White Clover (*Trifolium repens* L.)	TG/38/7	Ms. Margaret Wallace (GB)	CA, CZ, DE, FR, IT, JP, KR, NL, NZ, SK, ZA, Euroseeds, Office
White Mustard (*Sinapis alba* L.) (Revision)	TG/179/3	Ms. Beate Rücker (DE)	CA, CZ, HU, FR, IT, NL, NZ, PL, Office

Partial revisions

Species	Basic Document	Leading Expert(s)	Interested Experts (State / Organization)[1]
Sweet Potato (*Ipomoea batatas* (L.) Lam.) - Adding a new characteristic "Leaf blade: anthocyanin coloration of nectary" - Adding a new shape to "Storage root: shape" - Adding new colors to "Storage root: main color of flesh" - Revision of example variety for char. 23	TG/258/1, TWA/54/4	Mr. Toru Watanabe (JP)	CA, GB, HU, KR, NL, QZ, ZA, CIOPORA, Office

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

Draft Test Guidelines for possible future discussion

Species	Basic Document(s)	Possible Leading Expert
Common Millet (*Panicum miliaceum* L.) (Revision)	TG/248/1	AT
Couch Grass, Bermuda Grass (*Cynodon* Rich.)	New	Mr. Andrew Hallinan (AU)
Tall Fescue (*Festuca pratensis* Huds. / *Festuca arundinacea* Schreb.)	TG/39/8	NZ
Turnip Rape (*Brassica rapa* L. var. *silvestris* (Lam.) Briggs.) (Revision)	TG/185/3	FR

[End of Annex IV and of document]