

Technical Working Party for Agricultural Crops

TWA/52/11

Fifty-Second Session
Virtual meeting, May 22 to 26, 2023**Original:** English
Date: May 26, 2023

REPORT*Adopted by the Technical Working Party for Agricultural Crops**Disclaimer: this document does not represent UPOV policies or guidance*Opening of the session

1. The Technical Working Party for Agricultural Crops (TWA) held its fifty-second session via electronic means, from May 22 to 26, 2023. The list of participants is reproduced in Annex I to this report.
2. The session was opened by Ms. Renée Cloutier (Canada), Chairperson of the TWA, who welcomed the participants.

Adoption of the agenda

3. The TWA adopted the agenda as reproduced in document TWA/52/1 Rev.

Increasing participation in the work of the TC and restructuring the work of the TWPs

4. The TWA considered document TWP/7/1.
5. The TWA noted the clarifications sought from the Office of the Union and that some concerns were expressed by some members regarding the recommendations presented in document TWP/7/1. After considering those points the following approaches were agreed:
6. The TWA agreed to propose amending the recommendation in paragraph 32 to read that Technical Working Party meetings should be held on an annual basis as hybrid meetings. The TWA agreed to propose that online meetings should be organized whenever no member was available to organize a hybrid meeting.
7. The TWA considered the recommendations in paragraphs 33 and 34 and agreed to propose the inclusion of calibration exercises in the list of elements for discussion on DUS procedures, according to the crops and facilities in the member of the Union hosting the TWP.
8. The TWA agreed that hosts of TWP meetings should have flexibility to organize technical visits according to the local conditions and arrangements for DUS examination used.
9. The TWA noted the concerns expressed on the challenges to enable virtual participation at technical visits and agreed to propose exploring alternatives with TWP hosts, such as recording particular aspects of the visits or presentations about DUS procedures.
10. The TWA agreed that subgroup meetings held outside of TWP sessions, in addition to the sessions themselves, were useful to advance the drafting of Test Guidelines and increasing the participation of crop experts, including plant breeders.
11. The TWA agreed to propose that the web-based TG template be used for the drafting of members' national test guidelines and noted there were divergent views on whether these should be shared using the same TG template.

12. The TWA agreed that preparatory webinars were a useful tool for training on topics of particular relevance.
13. The TWA agreed that the mention to “UPOV certification” should be further clarified in the document.

Development of guidance and information materials

14. The TWA considered documents TWP/7/2 and TWA/52/10.

Matters for consideration by the Technical Working Parties

Document TGP/7 “Development of Test Guidelines”

Example varieties for asterisked quantitative characteristics when illustrations are provided

15. The TWA considered the situations described by the TWO as the basis to develop guidance on possible exceptions to the requirement to provide example varieties for asterisked quantitative characteristics when illustrations were provided.
16. The TWA agreed that Test Guidelines should provide as much information as possible to clarify the states of expression of a characteristic, such as using illustrations to complement the use of example varieties.
17. The TWA agreed to invite the experts from Germany in collaboration with Canada, Netherlands and United Kingdom to draft a proposal to amend the guidance in document TGP/7, GN 28 “Example Varieties”, concerning the situations where illustrations could replace example varieties and their complementary role to clarify the states of expression of a characteristic.

Disease resistance characteristics: Addition of state of expression and placement of non-asterisked disease resistance characteristics in Section 5 of the Technical Questionnaire

18. The TWA considered amending document TGP/7 GN 13 “Characteristics with specific functions” to clarify that disease resistance characteristics should be presented in Section 5 of Technical Questionnaires (TQ) with the addition of a state of expression “not tested”, as set out in document TWP/7/2, paragraph 21.
19. The TWA agreed with the TWV, at its fifty-seventh session, that document TGP/7 GN 13 “Characteristics with specific functions” should be amended to clarify that disease resistance characteristics not indicated with an asterisk in the table of characteristics may be presented in Section 5 of Technical Questionnaires (TQ) with the addition of a state of expression “not tested” when the characteristic was not used as a grouping characteristic.

DUSCEL statistical analysis software

20. The TWA received a presentation on “Development of Statistical Analysis Software: DUSCEL4.5” by an expert from China. A copy of the presentation is provided in document TWA/52/5.
21. The TWA noted the further development on the software, including the calibration work for image analysis of color characteristics.

New technologies in DUS examination

22. The TWA received a presentation on “Drone Imaging in Winter Wheat DUS Trials” by an expert from Denmark. A copy of the presentation is presented in Annex I to document TWA/52/7. The TWA noted the work reported and agreed to invite the expert from Denmark to report developments at its fifty-third session.
23. The TWA received a presentation on “UAV-Based Field Phenotyping in the United Kingdom Agricultural DUS testing” by an expert from the United Kingdom. A copy of the presentation is presented in Annex II to document TWA/52/7. The TWA noted the work reported and agreed to invite the expert from the United Kingdom to report developments at its fifty-third session.

24. The TWA received a presentation on “Image Analysis for Maize Ear and Grain” by an expert from China. A copy of the presentation is presented in the Annex document TWA/52/7 Add. The TWA noted the work reported and agreed to invite the expert from China to report developments at its fifty-third session.

25. The TWA agreed that it was important to receive reports on the use of new technologies in DUS examination for agricultural crops to increase awareness on developments and consider the limitations and challenges associated with new technologies.

26. The TWA agreed to propose the future organization of a webinar for TWPs on image analysis in DUS examination.

Denomination classes for *Allium*, *Brassica* and *Prunus*

27. The TWA considered document TWP/7/4.

Amending variety denomination classes for Brassica

28. The TWA considered the proposed amendments to the variety denomination classes for *Brassica*, as set out in document TWP/7/4, paragraph 13.

29. The TWA agreed that it would not be possible to achieve consensus on the proposal to create a separate denomination class for Oilseed Rape varieties (UPOV code BRASS_NAP_NUS). The TWA noted that certain varieties could be grouped on the basis of end use (forage / oil / vegetable) but in some cases not on the basis of existing DUS characteristics. The TWA noted that it was not possible to agree on the examination of variety denominations for different subspecies of *Brassica napus* as well as *B. nigra* and *B. rapa* under separate denomination classes.

UPOV information databases

Replacing complex botanical nomenclature by variety groups

UPOV codes for *Beta vulgaris*

30. The TWA considered document TWP/7/7.

31. The TWA agreed to create variety groups for the UPOV codes for *Beta vulgaris* L. ssp. *vulgaris*, as set out in document TWP/7/7, paragraph 8.

32. The TWA agreed with the TWV, at its fifty-seventh session, to propose naming the variety groups for *Beta vulgaris* ssp. *vulgaris* as “Fodder Beet”; “Garden Beet”; “Leaf Beet” and “Sugar Beet”.

UPOV codes for *Zea mays*

33. The TWA agreed to create variety groups for the UPOV code ZEAAA_MAY_MAY replacing intra-specific botanical names, as set out in document TWP/7/7, paragraph 12.

Molecular Techniques

34. The TWA considered document TWP/7/3.

Confidentiality and ownership of molecular information

35. The TWA received a presentation on “Confidentiality of Molecular Information” by an expert from CropLife International, on behalf of the African Seed Trade Association (AFSTA), the Asia and Pacific Seed Association (APSA), the International Community of Breeders of Asexually Reproduced Horticultural Plants (CIOPORA), CropLife International, Euroseeds, the International Seed Federation (ISF) and the Seed Association of the Americas (SAA). A copy of the presentation is presented in document TWA/52/8.

36. The TWA noted that experts from members and observers at the TWPs would be invited to report existing policies on confidentiality of molecular information.

37. The TWA noted the report from the European Union that a working group had been established to discuss matters related to confidentiality of molecular information.

Presentations on the use of molecular techniques in DUS examination

38. The TWA received a presentation on the “Argentine experience in rice genotyping” by an expert from Argentina. A copy of the presentation is presented in Annex I document TWA/52/6.

39. The TWA received a presentation on the “Use of molecular techniques in DUS examination: Field trials details of the Argentine Soybean experience” by an expert from Argentina. A copy of the presentation is presented in Annex II document TWA/52/6.

Experiences with new types and species

40. The TWA received a presentation “TG Hemp/Cannabis” by an expert from the Netherlands. A copy of the presentation is presented in the Annex to document TWA/52/9.

Discussion on draft Test Guidelines

Full draft Test Guidelines

Fodder Beet (*Beta vulgaris* L.) (Revision)

41. The subgroup discussed document TG/150/4(proj.1) presented by Ms. Anne-Lise Corbel (France), and agreed the following:

2.2	to check whether to read “The material is to be supplied in the form of naked seeds.”
2.3	minimum quantity of plant material, to be supplied by the applicant, to be indicated as 350 g
3.4.2	to be deleted and moved as explanation to 8.1 or 8.2
4.1.4	to check whether to reduce the number of plants or parts of plants (45 plants?)
4.2.5	to read “For the assessment of uniformity, a population standard of 2% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 200 plants, 7 off-types are allowed. In the case of a sample size of 100 plants, 5 off-types are allowed.”
6.5	7 growth stage key: to replace 8.3 by 8.2
Table of Chars.	to check whether to add a new characteristic “Root: prominence of rings”
Char. 1	to be indicated as QN
Char. 2	to be indicated as PQ
Chars. 5 to 7	to add example varieties
Char. 6	to reduce scale to 5 notes
Char. 8	to have states from “very light” to “very dark” (color intensity)
Char. 9	- to read “Leaf blade: color of midvein” - to add example varieties - to check whether to be deleted
Char. 12	to read “Leaf blade: width in relation to length”
Char. 13	- to read “Leaf blade: shape of apex” - state 1 to read “strongly acute” - state 2 to read “right angle” - state 3 to read “obtuse” - to add illustrations (see TGP/14, apex shapes)
Char. 15	- to be indicated as PQ - state 2 to read “yellow or orange”
Char. 17	- to check whether to reduce scale to 5 notes (no intermediate states for PQ chars.) or add additional states - to check whether to have states “obloid”, “obovoid”, “compressed oblong”, “elongated oblong”

Chars. 17 to 25	to replace growth stage 50 with 49
Char. 20	to read "Root: length in relation to width"
Char. 21	- to add illustrations and/or explanation - to check whether to add MS
Char. 23	- to be indicated as PQ - state 2 to read "yellowish white"
Char. 24	to be indicated as MG
Char. 25	to check whether to reduce scale to 3 notes
Ad. 2	to read as follows: [...] 2 - Diploid: At least 85% of the plants are diploids. In the case of a sample size of 100 plants, 21 off-types are allowed. 3 - Triploid: At least 75% of the plants are triploids. In the case of a sample size of 100 plants, 32 off-types are allowed. 4 - Tetraploid: At least 85% of the plants are tetraploids. In the case of a sample size of 100 plants, 21 off-types are allowed. [...]
Ad. 3	to read "Observations should be made on at least 100 seedlings, ..."
Ad. 17	to check whether to present shapes in a grid
TQ 4.1.1	to add complete breeding scheme

Hemp, Cannabis (*Cannabis sativa* L.) (Revision)

42. The subgroup discussed document TG/276/2(proj.2) presented by Ms. Lysbeth Hof (Netherlands), and agreed the following:

Cover page	- French names to read "Cannabis, Chanvre" - German names to read "Cannabis, Hanf" - Spanish names to read "Cáñamo, Cannabis" (names to be presented in alphabetical order)
General	- to check whether to rename "types" (throughout TG) - To replace "hermaphrodite" by "monoecious" (throughout TG)
2.3	abbreviation for grams to read "g" instead of "gr"
3.4.1 to 3.4.4	to read as follows: 3.4.1 In the case of varieties of types A and E, each test should be designed to result in a total of at least 200 plants which should be divided between at least 2 replicates. 3.4.2 In the case of varieties of type B, each test should be designed to result in a total of at least 60 plants which should be divided between at least 2 replicates. 3.4.3 In the case of varieties of type C, each test should be designed to result in a total of at least 10 plants. 3.4.4 In the case of varieties of type D, each test should be designed to result in a total of at least 20 plants which should be divided between at least 2 replicates.

4.1.4	<p>to read as follows:</p> <p>In the case of varieties of types A, B and E, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 20 plants or parts taken from each of 20 plants and any other observation made on all plants in the test, disregarding any off-type plants.</p> <p>In the case of varieties of type C, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 5 plants or parts taken from each of 5 plants and any other observation made on all plants in the test, disregarding any off-type plants.</p> <p>In the case of varieties of type D, unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 10 plants or parts taken from each of 10 plants and any other observation made on all plants in the test, disregarding any off-type plants.</p>
4.2.3 to 4.2.5	<p>to read as follows:</p> <p>4.2.3 The assessment of uniformity of varieties of type A should be according to the recommendations for cross-pollinated varieties in the General Introduction.</p> <p>4.2.4 In the case of varieties of type A, for the characteristics Leaf: variegation and Main stem: color, a population standard of 3% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 200 plants, 10 off-types are allowed.</p> <p>4.2.5 For the assessment of uniformity of varieties of type B, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 60 plants, 2 off-types are allowed.</p> <p>For the assessment of uniformity of varieties of type C, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, 1 off-type is allowed.</p> <p>For the assessment of uniformity of varieties of type D, a population standard of 2% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 20 plants, 2 off-types are allowed.</p> <p>For the assessment of uniformity of varieties of type E, a population standard of 2% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 200 plants, 7 off-types are allowed.</p>
6.5	<p>legend on types of varieties of example varieties to read as follows:</p> <p>The example varieties are indicated as follows (see chapter 2.3): (A): variety of type A (B): variety of type B (C): variety of type C (D): variety of type D (E): variety of type E</p>
Table of Chars.	<p>- to underline "Only varieties ..." (throughout the Table of Characteristics) - to check use of growth stage "2303b" (throughout Table of Characteristics)</p>
Char. 29	<p>to delete "Only varieties with..."</p>
Ad. 26 and 27	<p>to add explanation about equivalence of THC levels between notes 3 in char. 26 and note 1 in char. 27</p>

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

43. The subgroup discussed document TG/VIGNA_RAD(proj.1), presented by Ms. Lixia Wang, on behalf of the Leading Expert, Mr. Xiongfei Jiao (China), and agreed the following:

2.3	to check whether minimum quantity of plant material, to be supplied to be indicated as 10,000 seeds
4.1.1	to delete wording relating to hybrid varieties

4.2	- to add new paragraph as 4.2.3 to read: For the assessment of uniformity, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 100 plants, 3 off-types are allowed. In the case of a sample size of 200 plants, 5 off-types are allowed. - to delete current paragraph 4.2.3 relating to hybrid varieties
5.3	to add the following as grouping characteristics: (a) Hypocotyl: anthocyanin coloration (b) Time of maturity (c) Plant: growth habit (d) Seed: ground color of testa (e) Seed: seed coat luster
Char. 3	- to read "Stem: intensity of anthocyanin coloration"
Char. 4	to read "Stem: hairs"
Char. 5	to be deleted
Char. 6	- to read "Leaf: shape of lateral leaflet" to have states (1) narrow oval, (2) medium oval, (3) broad oval, (4) lobed
Char. 8	to read "Leaf: anthocyanin coloration at base of leaflets"
Char. 10	to read "Flower: ..." (delete "s")
Char. 11	- to read "Flower: anthocyanin coloration of keel flap" - to be indicated as QL or QN with three states
Char. 12	- to check whether to read "Flower: anthocyanin coloration of sepals" - to be indicated as QL or QN with three states - to check whether to add new characteristic "Flower: color of sepals (or petals?)"
Char. 13	- to read "Time of maturity" - to add explanation "The time of maturity is reached when
Char. 14	- to check whether to read "Plant: growth habit" - to check whether it is growth habit is correct (are they types; might an additional characteristic be needed with states "determinate", "indeterminate" "sprawl")
Char. 15	to read "Plant: height"
Char. 17	- to read "Plant: attitude of branches" - to check whether states to read "erect", "semi erect", "horizontal"
Char. 20	- to read "Stem: number of nodes" - to add explanation - growth stage to be indicated as 40 (delete 50)
8.1 or 8.2	to add illustration showing flower parts mentioned in the TG
8.1 (b)	to read "Observations should be made on lateral leaflets..."

*Oilseed Rape (*Brassica napus* L. *oleifera*) (Revision)

44. The subgroup discussed document TG/36/7(proj.4), presented by Ms. Margaret Wallace (United Kingdom), and agreed the following:

3.4.1	to read "Each test should be designed to result in a total of at least 200 plants, which should be divided between at least 2 replicates."
3.4.3	last sentence to read "Each test should be designed to result in at least 100 plants."
4.2.6	to read "...In the case of a sample size of 200 plants, 7 off-types are allowed. For the assessment of uniformity of single and multiple-cross hybrid varieties, a population standard of 10% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 200 plants, 27 off-types are allowed."
Chars. 2 to 6	to be indicated as MS/VG
Char. 13	state 2 to read "yellowish white"
Char. 18	to read "Plant: length"
Ad. 11	to delete "as indicated by 'a'" from explanation and remove "a." from illustration
Ad. 18	to change from "total length" to "length" in explanation and illustration
TQ 4.1.1	to add request for parent variety (as in (a))
TQ 4.1.4	to be deleted and move information to TQ 4.2

TQ 4.2	to read as follows: 4.2.1 Seed-propagated varieties (a) Cross-pollinated varieties [] (b) Hybrid [] (i) Single hybrid [] (ii) Three-way hybrid [] (c) Inbred line [] (d) Other (please provide details) [] 4.2.2 Other (Please provide details) []
TQ 7.3.1	to add seasonal type "Alternative (grown in winter or spring)"
TQ. 7.	to add 7.3.3: In case of male sterility: (a) GMS [] (b) CMS []

Safflower (*Carthamus tinctorius* L.) (Revision)

45. The subgroup discussed document TG/134/4(proj.1), presented by Ms. Beate Rücker (Germany), and agreed the following:

4.2	to add missing SW "These Test Guidelines have been developed for seed-propagated varieties ..."
Chars. 1, 2, 3	to remove space before colon
TQ 4.1	to use standard breeding scheme
TQ 4.2	to indicated seed-propagated varieties

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

46. The subgroup discussed document TG/186/2(proj.4), presented by Mr. Muhammad Ali Bhatti (Australia), and agreed the following:

3.3.2	to be deleted and explanation to be moved to 8.1 as explanation covering all characteristics
4.1.4	to read as follows (to check number of plants and parts of plants): "Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 6 plants or parts taken from each of 6 plants and any other observations made on all plants in the test, disregarding any off-type plants. "In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 1."
5.3	- to remove char. 19 - to remove char. 20 and to replace with ratio length/width of bud (new char.)
Table of Chars.	to check whether to replace all indications of "VS" by "VG" throughout the Table of characteristics
Char. 5	to delete "the"
Char. 6	to have states from "very small" to "very large"
Char. 9	to check whether to add more colors (white and green; yellow and green; yellow and purple; green; green and yellow; green and purple; purple; purple and yellow; purple and green)
Char. 10	- to check whether to add more colors (see comment on Char. 9) - to delete example variety "QS01 1078"
Char. 11	to reduce scale to 5 notes
Char. 12	to replace current example varieties for state 3 with "Q117"
Char. 14	to reduce scale to 5 notes
Char. 15	to be moved after char. 11 and to delete "absent or" from state 1
Char. 16	to correct states and notes (to have states from (1) very narrow to (9) very broad)
Char. 19	to be deleted
Char. 20	- to check whether to be replaced by ratio length/width - to remove asterisk

Char. 21	to reduce scale to 5 notes
Char. 22	to reduce scale to 5 notes
Char. 23	to reduce scale to 5 notes
Char. 25	to reduce scale to 5 notes
Char. 26	to have states from (1) very narrow to (5) very broad
Chars. 27, 28	to check whether to add more colors (see comment on Char. 9)
Char. 48	- to read "... in cross-section" - to add (*)
8.	explanation covering all characteristics to read "Unless otherwise indicated, observations should be made at time of maturity on plants aged between 10 to 12 months, in the first vegetative cycle of the crop (from planting to the first harvest)."
8.1	to add new explanation "The main color should be observed. The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the darker color is considered to be the main color." and to check to which color characteristics it applies
Ad. 17	to remove the illustrations covering "tall" (not included in char. 17)
Ad. 20	to check whether to present illustrations in a grid

*Zoysia grasses (Zoysia Willd.)

47. The subgroup discussed document TG/ZOYSI(proj.4), presented by Mr. Toru Watanabe (Japan), and agreed the following:

2.3	to delete "vegetatively propagated varieties:"
3.4.1	to read "... at least 2 replicates."
5.3 (c)	to be deleted
Char. 3	to read "Plant: density of stolons"
Table of Chars.	- to reorder characteristics - to check time of observation - flowering characteristics: to check difference between first and second flowering. Is the differentiation between first and second flowering necessary?
Char. 1	to check name of characteristic (e.g. attitude of leaves?)
Char. 2	- to delete (b) - to reduce scale to 5 notes
Char. 3	to read "Plant: density of stolons"
Char. 5	to read "Stolon leaf: anthocyanin coloration of sheath"
Char. 6	- to read "Stolon leaf: length of sheath" - to reduce scale to 5 notes
Char. 10	to check whether to be deleted
Chars. 15, 16	to be deleted
Char. 25	to read "Time of beginning of vegetative growth"
Char. 27	to read "Time of beginning of leaf senescence"
Char. 28	to check whether to read "Leaf: color in autumn" and have colors as states of expression
8.1 (a)	to read "The plants, stolons, and leaves should be observed 4 months after time of beginning of vegetative growth."
8.1 (d)	to read "Observations should be made at the time of first flowering in the second year."
Ad. 15	to be deleted
Ad. 27	to read "Observations should be made when 50% of the leaves have changed color in autumn."
8.3	- first part: to be moved as explanation to 8.1 - growth stages: to be revised (to clarify observation in spring or autumn; e.g. planting overwintering, time of beginning of vegetative growth after winter)

Partial revisions

*Barley (*Hordeum vulgare* L.)

48. The TWA received an oral report from the Leading Expert, Ms. Margaret Wallace (United Kingdom) that the subgroup had not identified any changes required to Section 5 of the Technical Questionnaire and agreed not to pursue further the partial revision of the Test Guidelines for Barley at this time.

*Maize (*Zea mays* L.)

49. The subgroup discussed document TWV/57/4-TWA/52/4, presented by Ms. Bronislava Bátorová (European Union), and noted that the TWV had agreed the following (see document TWV/57/26 "Report", paragraph 69):

Char. 24.1, 24.2	to check whether to keep unchanged as in current adopted version
TQ 5.	to remove all occurrences of the option "not applicable"

50. The subgroup agreed the following:

Char. 24.2	to delete example varieties "PR39D23" and "DKC5166"
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Recommendations on draft Test Guidelines

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

51. The TWA agreed that the following draft Test Guidelines should be submitted to the TC for adoption at its fifty-ninth session, to be held in Geneva on October 23 and 24, 2023, on the basis of the following documents and the comments in this report:

Full draft Test Guidelines

<u>Subject</u>	<u>Basic Document(s) (2023)</u>
*Oilseed Rape (<i>Brassica napus</i> L. <i>oleifera</i>) (Revision)	TG/36/7(proj.4)
Safflower (<i>Carthamus tinctorius</i> L.) (Revision)	TG/134/4(proj.1)

Partial revisions

<u>Subject</u>	<u>Basic Document(s) (2023)</u>
*Maize (<i>Zea mays</i> L.) - TQ: adding characteristics from T. o. C.	TG/2/7, TWV/57/4-TWA/52/4

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

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

Full draft Test Guidelines

<u>Subject</u>	<u>Basic Document(s) (2023)</u>
Grain Amaranth (<i>Amaranthus</i> L.)	TG/247/1
Bent (<i>Agrostis canina</i> L., <i>Agrostis gigantea</i> Roth, <i>Agrostis stolonifera</i> L., <i>Agrostis capillaris</i> L.)	TG/30/6
Couch Grass, Bermuda Grass (<i>Cynodon</i> Rich.)	New
Festulolium (× <i>Festulolium</i> Asch. et Graebn.)	TG/243/1
Fodder Beet (<i>Beta vulgaris</i> L.) (Revision)	TG/150/4(proj.1)

*Hemp, Cannabis (<i>Cannabis sativa</i> L.) (Revision)	TG/276/2(proj.2)
Mung Bean (<i>Vigna radiata</i> (L.) R. Wilczek)	TG/VIGNA_RAD(proj.1)
*Sugarcane (<i>Saccharum</i> L.) (Revision)	TG/186/2(proj.4)
*Zoysia Grasses (<i>Zoysia</i> Willd.)	TG/ZOYSI(proj.4)

Partial revisions

Subject	Basic Document(s) (2023)
*Maize (<i>Zea mays</i> L.) - Characteristics 24.1 and 24.2 - Addition of new characteristics Tassel: sterility of male flowers Secondary color of grain - addition of characteristic to TQ 5	TG/2/7, TWV/57/4-TWA/52/4

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

(c) *Possible Test Guidelines to be discussed in 2025*

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

Subject	Basic Document(s) (2023)
Common Millet (<i>Panicum miliaceum</i> L.) (Revision)	TG/248/1
Turnip Rape (<i>Brassica rapa</i> L. var. <i>silvestris</i> (Lam.) Briggs.) (Revision)	TG/185/3
White Mustard (<i>Sinapis alba</i> L.) (Revision)	TG/179/3

Matters for information

55. The TWA noted that the following documents contained matters for information only:

1. Short reports on developments in plant variety protection
 - (a) Reports from members and observers (document TWA/52/3)
 - (b) Report on developments within UPOV (document TWA/52/2)
2. Development of guidance and information materials: matters for information (document TWP/7/2)
 - (a) Document TGP/7 "Development of Test Guidelines":
 - i. Disease resistance characteristics: Addition of state of expression and placement of non-asterisked disease resistance characteristics in Section 5 of the Technical Questionnaire
 - ii. Document TGP/8: Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability": Section 9: "The Combined-Over-Years Uniformity Criterion (COYU)" (document TWP/7/2)
3. Cooperation in examination (document TWP/7/1)
4. Information and databases
 - (c) UPOV information databases (document TWP/7/7)
 - (d) Variety description databases (document TWP/7/6)
 - (e) Exchange and use of software and equipment (document TWP/7/5)
 - (f) UPOV PRISMA (document TWP/7/1)
5. Molecular Techniques: Matters for information (document TWP/7/3)
6. Variety denominations: Matters for information (document TWP/7/8)
7. Revision of Test Guidelines (document TWP/7/9)
8. Guidance for drafters of Test Guidelines (document TWP/7/1)

Date and place of the next session

56. The TWA noted that no invitations for the venue of its fifty-third 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-seventh session, to be held on October 27, 2023.

57. The TWA agreed that its fifty-third session should be held via electronic means, from May 27 to 31, 2024, if no alternative offer was received from a member of the Union.

Chairperson

58. The TWA thanked Ms. Renée Cloutier for chairing the TWA and noted that she was awarded a UPOV bronze medal in recognition of chairing the TWA from 2021 to 2023.

Future program

59. The TWA agreed that documents would be prepared in case of developments to be reported or presentations from members and observers on agenda items proposed for the session.

60. In order to allow sufficient time in advance of the meeting to post the documents and provide comments, all documents and presentations invited or to be prepared should be sent to the Office of the Union by March 8, 2024.

61. The TWA 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. Situations where illustrations could complement or replace example varieties (document to be prepared by Germany in collaboration with Canada, Netherlands and United Kingdom)
5. Examining hybrid varieties (documents invited)
6. Variety description databases (documents invited)
7. Image analysis and new technologies in DUS examination (documents to be prepared by China, Denmark, United Kingdom and presentations invited)
8. Presentations on the use of molecular techniques in DUS examination (presentation from Argentina and presentations invited)
9. Reports on existing policies on confidentiality of molecular information (presentations invited)
10. Using the COYU-Splines method in DUS examination (presentations invited)
11. Experiences with new types and species (oral reports invited)
12. Developing new characteristics for Barley variety examination (documents to be prepared by France and the United Kingdom)
13. Discussion on draft Test Guidelines (Subgroups)
14. Recommendations on draft Test Guidelines
15. Date and place of the next session
16. Future program
17. Adoption of the Report on the session (if time permits)

Matters for information

18. Reports from members and observers (written reports to be prepared by members and observers)
19. Report on developments within UPOV (general developments, including variety denominations, information databases, exchange and use of software and equipment)
20. Closing of the session

62. The TWA adopted this report at the end of the session.

[Annex I follows]

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Romy OERTEL (Ms.), Secretary II

Jessica MAY (Ms.), Secretary I

[Annex II follows]

**DRAFT TEST GUIDELINES TO BE SUBMITTED
TO THE TECHNICAL COMMITTEE IN 2023**

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

before July 6, 2023

Full draft Test Guidelines

Species	Basic Document(s)	Leading expert
*Oilseed Rape (<i>Brassica napus</i> L. <i>oleifera</i>) (Revision)	TG/36/7(proj.4)	Ms. Margaret Wallace (GB)
Safflower (<i>Carthamus tinctorius</i> L.) (Revision)	TG/134/4(proj.1)	Ms. Beate Rücker (DE)

Partial revisions

Species	Basic Document(s)	Leading expert
*Maize (<i>Zea mays</i> L.) - TQ: adding characteristics from T. o. C.	TG/2/7, TWV/57/4-TWA/52/4	Ms. Bronislava Bátorová (QZ)

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWA/53
(* indicates possible final draft Test Guidelines)

Guideline date for Subgroup draft to be circulated by Leading Expert: **February 16, 2024**

Guideline date for comments to Leading Expert by Subgroup: **March 15, 2024**

New draft to be submitted to the Office of the Union
before April 12, 2024

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) ¹
Grain Amaranth (<i>Amaranthus</i> L.)	TG/247/1	Mr. Lubomir Basta (SK)	DE, FR, HU, IT, JP, KE, QZ, ZA, Euroseeds, ISF, Office
Bent (<i>Agrostis canina</i> L., <i>Agrostis gigantea</i> Roth, <i>Agrostis stolonifera</i> L., <i>Agrostis capillaris</i> L.)	TG/30/6	Mr. Peter Hendriks (NL)	CZ, DE, FR, IT, JP, KE, QZ, Euroseeds, ISF, Office
Couch Grass, Bermuda Grass (<i>Cynodon</i> Rich.)	New	Mr. Andrew Hallinan (AU)	BR, CN, FR, IT, JP, QZ, Euroseeds, ISF, Office
Festulolium (× <i>Festulolium</i> Asch. et Graebn.)	TG/243/1	Ms. Lydie Cechová (CZ)	DE, DK, FR, IT, JP, NL, NZ, QZ, UY, ZA, Euroseeds, ISF, Office
Fodder Beet (<i>Beta vulgaris</i> L.) (Revision)	TG/150/4(proj.1)	Ms. Anne-Lise Corbel (FR)	DE, DK, ES, GB, JP, QZ, RO, ZA, Euroseeds, ISF, Office
*Hemp, Cannabis (<i>Cannabis sativa</i> L.) (Revision)	TG/276/2(proj.2)	Ms. Lysbeth Hof (NL)	AR, AT, AU, CA, DE, ES, FR, GB, HU, IT, JP, KE, NZ, QZ, RO, UY, ZA, CIOPORA, Euroseeds, ISF, Office
Mung Bean (<i>Vigna radiata</i> (L.) R. Wilczek)	TG/VIGNA_RAD (proj.1)	Mr. Xiongfei Jiao (CN)	TWV, AR, AU, FR, JP, KR, QZ, Euroseeds, ISF, Office
*Sugarcane (<i>Saccharum</i> L.) (Revision)	TG/186/2(proj.4)	Mr. Ali Bhatti (AU)	AR, BR, CN, JP, KE, QZ, TZ, ZA, ISF, Office
*Zoysia Grasses (<i>Zoysia</i> Willd.)	TG/ZOYSI(proj.4)	Mr. Toru Watanabe (JP)	AU, BR, ES, KR, QZ, Euroseeds, ISF, Office

Partial revisions

Species	Basic Document	Leading Expert(s)	Interested Experts (State / Organization) ¹
*Maize (<i>Zea mays</i> L.) - Characteristics 24.1 and 24.2 - Addition of new characteristics Tassel: sterility of male flowers Secondary color of grain - addition of characteristic to TQ 5	TG/2/7, TWV/57/4-TWA/52/4	Ms. Cécile Marchenay (NL)	TWV, AR, AT, BR, CA, CN, CZ, DE, ES, FR, HU, IT, JP, KE, KR, MX, PT, QZ, RO, SK, TZ, ZA, CLI, Euroseeds, ISF, Office

¹ for name of experts, see list of participants

Draft Test Guidelines for possible future discussion

Species	Basic Document(s)
Common Millet (<i>Panicum miliaceum</i> L.) (Revision)	TG/248/1
Turnip Rape (<i>Brassica rapa</i> L. var. <i>silvestris</i> (Lam.) Briggs.) (Revision)	TG/185/3
White Mustard (<i>Sinapis alba</i> L.) (Revision)	TG/179/3

[End of Annex II and of Report]