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|  |  | E  TWA/44/23  **ORIGINAL:**  English  DATE:  July 20, 2015 |
| INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS | | |
| Geneva | | |

Technical working party for Agricultural crops

Forty-Fourth Session  
Obihiro, Japan, July 6 to 10, 2015

report

Document prepared by the Office of the Union  
  
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The Technical Working Party for Agricultural Crops (TWA) held its forty-fourth session in Obihiro, Japan, from July 6 to 10, 2015. The list of participants is provided in Annex I to this report.

The TWA was welcomed by Mr. Katsuhiro Saka, Director, New Business and Intellectual Property Division, Ministry of Agriculture, Forestry and Fisheries (MAFF). A copy of the welcome address is provided in Annex II to this report.

The TWA received a presentation on the Plant Variety Protection system in Japan by Mr. Katsumi Yamaguchi, Director, Plant Variety Protection Office, New Business and Intellectual Property Division, MAFF, a copy of which is provided in Annex III to this report.

The TWA received a presentation on breeding for agricultural crops in Japan, by Mr. Ikuo Ando, Director, Rice Research Area, National Agricultural and Food Research Organization (NARO), a copy of which is provided in Annex IV to this report.

The session was opened by Mr. Tanvir Hossain (Australia), Chairman of the TWA, who welcomed the participants and thanked Japan for hosting the TWA session.

## Adoption of the Agenda

The TWA adopted the agenda as presented in document TWA/44/1 Rev.

Short Reports on Developments in Plant Variety Protection

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

The TWA noted the information on developments in plant variety protection from members and observers, provided in document TWA/44/22 Prov.. The TWA noted that reports submitted to the Office of the Union after June 22, 2015, would be included in the final version of document TWA/44/22.

### (b) Reports on developments within UPOV

The TWA received a presentation from the Office of the Union on latest developments within UPOV, a copy of which is provided in document TWA/44/21.

The TWA agreed to propose that the on-line distance learning course DL-305 be held twice in 2016, once in the Spring and once in the Autumn, to allow maximum participation of DUS experts.

## TGP documents

The TWA considered documents TWA/44/3 and TWA/44/3 Add.

### Matters for adoption by the council in 2015

The TWA noted the revisions to documents TGP/0, TGP/5, TGP/9 and TGP/14 to be put forward for adoption by the Council at its forty-ninth ordinary session, as set out in paragraphs 6 to 18 of document TWA/44/3.

### Future revision of TGP documents

The TWA noted that the proposals for future revisions of TGP documents to be discussed by the TWPs at their sessions in 2015 would be dealt with under separate documents.

The TWA noted that the TC had agreed that it would not be necessary to develop further guidance to address issues relating to plant material submitted for examination beyond that already provided in documents TG/1/3, TGP/7 and TGP/9.

The TWA noted that the TC had agreed that authorities should provide guidance on the requirements of material submitted for DUS examination to avoid possible effects resulting from the method of propagation (e.g. micropropagation) in the expression of DUS characteristics.

The TWA noted that the TC had agreed to add new standard wording in the TG template, Chapter 4.2 “Uniformity”, and amend ASW 8 (c) to provide guidance for Test Guidelines that are developed on the basis of varieties with one type of propagation when varieties may be developed in the future with other types of propagation, for future revision of document TGP/7, as set out in paragraph 24 of document TWA/44/3.

The TWA noted that the TC had agreed that the existing guidance in documents TGP/8: Part I: “DUS trial design and data analysis” and TGP/9 “Examining distinctness” was sufficient to address guidance for blind randomized trials.

The TWA noted that the TC had agreed to include guidance on “Examining characteristics using image analysis”, for future revision of document TGP/8, as presented in paragraphs 26 and 27 of document TWA/44/3.

### Program for the development of TGP documents

The TWA noted the program for the development of TGP documents, as set out in the Annex to document TWA/44/3.

### TGP/7: Development of Test Guidelines

#### Revision of document TGP/7: Use of Proprietary Text, Photographs and Illustrations in Test Guidelines

The TWA considered document TWA/44/13

The TWA agreed with the proposed guidance set out in paragraph 7 of document TWA/44/13 in relation to text, photographs or illustrations that could be subject to third party rights, for inclusion in a future revision of document TGP/7, as follows:

“In the case of text, photographs, illustrations or other material that is subject to third party rights, it is the responsibility of the author of the document, including Test Guidelines, to obtain the necessary permission of the third party. Material must not be included in documents where such permission is required but has not been obtained.”

The TWA agreed that references should be provided in Chapter 9 “Literature” of the Test Guidelines for all text, photographs and illustrations that were subject to third party rights and for which permission had been obtained.

The TWA agreed that the third party granting permission should be informed about the extent of use of UPOV documents by its members.

#### Revision of document TGP/7: Drafter’s Kit for Test Guidelines

The TWA considered document TWA/44/12.

The TWA agreed with the proposal to revise document TGP/7 to reflect the introduction of the web‑based TG Template after Version 1 is finalized.

The TWA agreed with the proposal to standardize the format of the Table of Characteristics in all Test Guidelines with a structure as set out in paragraph 15 of document TWA/44/12.

The TWA noted that all Leading Experts had prepared the draft Test Guidelines for discussion during the TWPs at their sessions in 2015 using the web-based TG Template.

The TWA noted that all Interested Experts had been required to provide their comments on draft Test Guidelines for discussion during the TWPs at their sessions in 2015 using the web-based TG Template.

The TWA noted the issues that would be addressed in response to the comments by Leading and Interested Experts that participated in the testing of the 2015 prototype of the web based TG Template, as set out in paragraphs 13 and 14 of document TWA/44/12. The TWA also received a demonstration of the planned resolution of those issues that would be addressed in the 2015 prototype of the web based TG Template, as set out in paragraphs 13 and 14 of document TWA/44/12.

The TWA noted the timetable for development of the web-based TG Template, as set out in paragraphs 17 to 19 of document TWA/44/12.

#### Revision of document TGP/7: Regional Sets of Example Varieties

The TWA considered document TWA/44/14.

The TWA agreed to include guidance in document TGP/7 that a “region” should be comprised of more than one country in order to justify a regional set of example varieties in Test Guidelines.

The TWA noted that current guidance in document TGP/7, GN28, stated that “UPOV Test Guidelines need to cover all the different countries, regions and environments where the DUS examinations are conducted and, as far as possible, they provide universal sets of example varieties in order to maximize harmonization of variety descriptions.” The TWA also noted that GN28 stated that “authorities responsible for DUS testing and breeders need to be able to obtain plant material of example varieties and therefore, in general, example varieties should be widely and readily available for the coverage of the Test Guidelines” and “drafters are encouraged to seek lists of varieties from interested parties in order to identify example varieties with the widest availability.”

The TWA agreed with the TWV that, in the case of regional sets of example varieties, a “region” should be defined by the environmental conditions rather than national boundaries.

The TWA agreed to include guidance in document TGP/7 that the TWP should determine the basis on which the region would establish an agreed regional set of example varieties (e.g. by an exchange of information, or by a ring-test).

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

#### Revision of document TGP/8: Part I: DUS Trial Design and Data Analysis, New Section: Minimizing the Variation due to Different Observers

The TWA considered document TWA/44/15.

The TWA agreed with the draft guidance in the Annex to document TWA/44/15, for inclusion in a future revision of document TGP/8 on minimizing the variation due to different observers.

#### Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, Section 9: the Combined-Over-Years Uniformity Criterion (COYU)

The TWA considered document TWA/44/16.

The TWA noted that participants of the exercise to test the software on the new method for the calculation of COYU should:

(i) seek to define probability levels to match decisions using the previous COYU method;

(ii) run the test for rejection probabilities of 1, 2 and 5% levels; and

(iii) assess whether the results are consistent in all crops.

The TWA noted that the expert from the United Kingdom had distributed the software module for calculation of COYU and the guidance document to the participants of the exercise.

The TWA noted that the experts from Czech Republic, France, Finland, Germany, Kenya, Poland and United Kingdom would participate in the exercise to test the new software on COYU.

The TWA noted that a report on the practical exercise and the development of DUST module were presented at the thirty-third session of the TWC by an expert from the United Kingdom.

#### Revision of document TGP/8: Part II: Selected Techniques used in DUS Examination, New Section: Examining DUS in Bulk Samples

The TWA considered document TWA/44/17.

The TWA considered further information provided by an expert from the Netherlands on the example of a bulk characteristic in the Netherlands: Content of Glycoraphanin, as reproduced in Annex II to document TWA/44/17 and agreed that it would be necessary to analyze the data obtained from the assessment of the characteristic in order to understand the conclusions provided.

The TWA noted that the TC, at its fifty-first session, had agreed to consider further whether the analysis of individual plants to validate characteristics examined on the basis of bulk samples was necessary, and the possible cost implications, and had agreed to invite proposals for alternative approaches for the examination of uniformity.

The TWA noted that the TC, at its fifty-first session, had agreed that further information on fulfilling the requirements of a DUS characteristic should be provided in the example of a characteristic examined on the basis of a bulk sample. In that regard, the TWA considered document TWA/44/17, Annex I, provided by an expert from the Netherlands on uniformity requirements in bulk characteristics and concluded as follows:

* before a characteristic observed on the basis of a bulk sample, was included in Test Guidelines it should be considered whether it would be useful and necessary for DUS examination.
* approaches (a) “Control of the characteristic before it is accepted in the relevant guideline”; (d) “Subplots”; and (i) “Plant number” in Annex I should be further developed for the analysis of requirements that a characteristic examined on the basis of bulk samples should fulfill before it is used for DUS testing and producing a variety description.
* approach (h) “DNA analysis” was too general and did not provide useful information for the assessment of uniformity in characteristics observed on the basis of bulk samples. The TWA noted that molecular markers could be used as a method of examining DUS characteristics on the basis of the existence of a reliable link between the marker and the characteristic, in which case the assessment on basis of bulk samples would not be necessary.

The TWA noted that the TC, at its fifty-first session, had agreed that the determination of states of expression should be based on existing variation between varieties and considering environmental influence.

The TWA noted the offer of France to provide other examples of characteristics based on bulk samples and that the TC had invited other members to provide examples.

#### Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section: Data Processing for the Assessment of Distinctness and for Producing Variety Descriptions

The TWA considered document TWA/44/18.

The TWA noted that the TWC and the TWA had previously agreed that the guidance on “Different forms that variety descriptions could take and the relevance of scale levels”, as reproduced in document TWA/44/18, Annex I, should be used as an introduction to future guidance to be developed on data processing for the assessment of distinctness and for producing variety descriptions.

The TWA noted that the TWC had agreed to compare the results of the practical exercise presented by the different participants to identify differences in the results obtained for further understanding of the different methodologies, for consideration at the thirty‑third session of the TWC, to be held in Natal, Brazil, from June 30 to July 3, 2015.

The TWA noted that the European Union had reported to the Technical Committee that the project on a ring-test on Apple for the management of variety description to be launched in 2015 had been suspended.

### TGP/10: Examining Uniformity

#### Revision of document TGP/10: Assessing uniformity by off-types on basis of more than one growing cycle or on the basis of sub-samples

The TWA considered document TWA/44/9.

The TWA agreed that the draft guidance for inclusion in a future revision of document TGP/10, as presented in document TWA/44/9 Annex I, should continue to be developed considering the information provided by the TWC on the proposed “Approach 3: combining the results of two growing cycles” and the comparison between the overall risk of the combined samples and the risks for each stage of evaluation separately. The TWA agreed to request a video link with the experts from the TWC to discuss the proposed “Approach 3”.

The TWA agreed to propose that the first sentence in Annex I be amended to read: “two independent growing cycles could take place in a single location in different years, or in different locations in the same year, according to document TGP/8 Part I, Sections 1.2 and 1.3.”

The TWA considered the draft guidance provided in document TWA/44/9 Annex I, on the possibility to reject a variety on the basis of a lack of uniformity after a single growing cycle. The TWA agreed that a variety should not be rejected if the uniformity standard was slightly exceeded in the first year. This possibility should only be used if it could be foreseen that the maximum limit would be exceeded also in another growing cycle. In that regard, the TWA agreed to propose that the explanation provided in Annex I, on the possibility to reject a variety on the basis of a lack of uniformity after a single growing cycle, should be amended to read: “Furthermore, on the basis of a clear lack of uniformity, a variety may be rejected after a single growing cycle.”

## Matters concerning variety descriptions

The TWA considered document TWA/44/10 and received a presentation by an expert from the European Union on “Experience with regard to variety descriptions and verifying the maintenance of the variety at the Community Plant Variety Office (CPVO)”, which would be made available as an addendum to document TWA/44/10.

The TWA noted the experience of the European Union examination offices that, for agricultural crops, a standard sample of the plant material submitted for DUS examination was usually kept by the authority and would be used for verifying the maintenance of the variety against the material provided by the breeder.

The TWA agreed to invite Australia, the European Union and Germany to make a presentation on matters concerning variety descriptions at its forty-fifth session, to be held in 2016.

## Statistical Methods for Visually Observed Characteristics

The TWA considered document TWA/44/20.

The TWA noted that the TC, at its fifty-first session, had agreed to remove the document “Statistical methods for visually observed characteristics” from the program for the revision of document TGP/8, and to consider the matter under a separate agenda item.

The TWA noted that the TWC had invited an expert from China to make a presentation at the thirty‑third session of the TWC on the analysis of visually observed characteristics using the DUST China (DUSTC) software package using the data set of meadow fescue provided by Finland.

## Definition of color groups from RHS Colour Charts

The TWA considered document TWA/44/19.

The TWA considered the possibility to use RHS Colour Chart references as a basis for defining color groups for the purposes of grouping of varieties and organization of the growing trial. The TWA noted that color charts were not routinely used for agricultural crops and agreed that, for the TWA crops, the organs observed and level of variation between the varieties meant that such a level of precision was not useful. The TWA agreed that it would be preferable to use simplified terms to describe color characteristics, such as single colors, color ranges and intensity of a colors in its Test Guidelines (see document TGP/14/2: Section 2: Botanical Terms, Subsection 3: Color: 2. Color).

## Molecular techniques

The TWA considered document TWA/44/2.

The TWA noted the report on developments in the BMT, as set out in paragraphs 7 to 10 of document TWA/44/2, and agreed that it would be important to determine a date for the next session of the BMT in order to maximize participation of all interested experts.

The TWA noted that the TC, at its fifty-first session, had agreed to develop a joint document explaining the principal features of the systems of OECD, UPOV and ISTA, subject to the approval of the Council and in coordination with the OECD and ISTA, as set out in paragraph 18 of document TWA/44/2.

The TWA noted that the TC, at its fifty-first session, had agreed to develop an inventory on the use of molecular marker techniques, by crop, with a view to developing a joint OECD/UPOV/ISTA document containing that information, in a similar format to UPOV document UPOV/INF/16 “Exchangeable Software”, subject to the approval of the Council and in coordination with the OECD and ISTA, as set out in paragraph 20 of document TWA/44/2.

The TWA noted that the TC, at its fifty-first session, had agreed the proposal for the BMT, at its fifteenth session, to develop lists of possible joint initiatives with OECD and ISTA in relation to molecular techniques for consideration by the TC, as set out in paragraph 21 of document TWA/44/2.

The TWA noted that the OECD/UPOV/ISTA Joint Workshop on Molecular Techniques had agreed that it would be useful to repeat the joint workshop at relevant meetings of the OECD and ISTA, as set out in paragraph of document TWA/44/2, and, in that regard, that the Technical Working Group Meeting of the OECD Seed Schemes, had agreed that another OECD/UPOV/ISTA Joint Workshop on Molecular Techniques should be organized either back-to-back with the Annual Meeting of the OECD Seed Schemes or in conjunction with the OECD Technical Working Group Meeting.

The TWA considered the initial draft question and answer concerning the information on the situation in UPOV with regard to the use of molecular techniques for a wider audience, including the public in general, discussed during the TC, at its fifty-first session. The TWA agreed to propose the text to read as follows:

“Is it possible to obtain protection of a variety on the basis of its DNA-profile?

“A variety cannot be protected on the basis of DNA profiles. For a variety to be protected, it needs to be clearly distinguishable from all existing varieties on the basis of characteristics that are physically expressed, e.g. plant height, time of flowering, fruit color, disease resistance etc. ~~[Molecular techniques (DNA profiles) may be used as supporting information].~~

“A more detailed explanation is provided in the FAQ ‘Does UPOV allow molecular techniques (DNA profiles) in the examination of Distinctness, Uniformity and Stability (“DUS”)?’

“See also:

“What are the requirements for protecting a new plant variety?”

## Variety denominations

The TWA considered document TWA/44/4.

The TWA noted that the TC, at its fifty-first session, and the CAJ, at its seventy-first session, had noted the work on the possible development of a UPOV similarity search tool for variety denomination purposes by the Working Group for the Development of a UPOV Denomination Similarity Search Tool (WG‑DST), including the test study, and that the TC had also noted that the result of the test study would be reported to the second meeting of the WG-DST and the most effective search tool would be described and documented, as set out in paragraphs 6 to 13 of document TWA/44/4.

The TWA noted that the TC, at its fifty-first session, and the CAJ, at its seventy-first session, had noted the proposed revision of document UPOV/INF/12 in relation to changes of registered variety denominations, as set out in paragraph 18 of document TWA/44/4, and that the CAJ had approved the presentation of that guidance for adoption by the Council at its forty-ninth ordinary session.

The TWA noted that the CAJ, at its seventy-first session, had agreed to invite the WG-DST to consider the comments by the CAJ-AG, at its ninth session, on the proposals in document UPOV/INF/12/5 Draft 2 concerning Sections 2.2.2 (b), 2.3.1 (c) and (d), and 2.3.3, in conjunction with the development of an effective UPOV similarity search tool, and any conclusions by the WG-DST to revise document UPOV/INF/12, if appropriate, as set out in paragraph 24 of document TWA/44/4.

The TWA noted that the CAJ, at its seventy-first session, had agreed to consider the proposals of the CAJ-AG under Sections 2.2.2 (c), 4(a) and 4(e)(i) at its seventy‑second session, as set out in paragraph 25 of document TWA/44/4.

## Experiences with new types and species

An expert from Argentina reported on new varieties of *Trichloris crinita*, which had been granted plant variety protection and listed in the National List.

An expert from the Netherlands reported on applications for new varieties of *Solanum sisymbriifolium* and for an application for a potato variety propagated by true potato seed (TPS).

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

The TWA noted that the TC, at its fifty-first session, held in Geneva from March 23 to 25, 2015, had adopted the Test Guidelines for Adlay (document TG/COIX(proj.5)), subject to the addition of asterisks to Characteristics 1, 13, 14 and 20 being approved by the TWA by correspondence, as set out in Annex II to document TC/51/39 “Report”.

The TWA noted that the Office had issued circular E-15/094, requesting approval by correspondence for the addition of asterisks to Characteristics 1, 13, 14 and 20 and noted that, as no objections had been received by the deadline of May 1, 2015, the Test Guidelines for Adlay had been adopted and would be published imminently.

## Discussion on draft Test Guidelines

*Cotton (*Gossypium *L.)*

The subgroup discussed document TG/88/7(proj.1), presented by Mr. Antonio Escolano García (Spain), on behalf of the Leading Expert, Mr. Luis Salaices (Spain), and agreed the following:

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| General | Leading Expert to confirm that all IP rights on photos, illustrations and text have been respected |
| 2.3 | - to simplify wording to read “in the case of hybrids, 2 kg of seed of each component should be submitted, if requested”  - to check whether to reduce the quantity of plant material requested for components of hybrids |
| 5.3 | to add TQ Chars. 3 and 6 as grouping characteristics |
| 6.5 | to add reference to growth stages |
| Table of Chars. | - to check whether to add more (\*)  - to order characteristics in chronological order according to growth stages  - to present growth stage in Chapter 8.3 and remove (g)  - to check availability of example varieties |
| Char. 1 | to replace “cream” with appropriate color (whitish?) |
| Char. 3 | - state 2 to read “medium yellow”  - to replace “cream” with appropriate color (whitish?) |
| Char. 4 | - to be continued as QN  - to have stats “clearly below”, “same level”, “clearly above”  - to check whether to be deleted or modified (to specify which flower to be observed) |
| Chars. 5, 7, 8, 9 | - to add example varieties  - to check whether to be deleted |
| Char. 8 | to check whether to read “Fruiting branch: length of internodes” |
| Char. 9 | to check whether to read have states from “very few” to “very many” |
| Char. 10 | to check whether to be deleted or to reduce scale |
| Char. 11 | - to check whether to add example varieties for state 4 “lanceolate”  - to check whether state 4 to read “super okra”  - to check growth stage |
| Char. 12 | to check whether to be deleted |
| Char. 13 | to read “Leaf: pubescence of lower side” |
| Char. 15 | to read “Stem: pubescence of upper part” |
| Char. 16 | - state 3 to read “light red”  - to add state 4 “dark red” |
| Char. 17 | to check whether to add explanation to clarify states of expression (see TGP/14) |
| Char. 20 | - to read “Boll: shape”  - to replace “rounded” by “circular” |
| Char. 23 | - to check whether to read “Boll: tip” or “Boll: shape of apex” and include differentiated tip in states of expression  - to check wording of states of expression  - to check whether to reduce scale to 1 to 3 or 1 to 5 |
| Char. 27 | - to check whether to read “Time of opening of bolls”  - to add explanation on time of observation (“when 50% of the plants have at least one boll open) |
| Char. 29 | to check whether “fuzz” is an appropriate botanical term |
| Char. 31 | to check whether to add more states of expression |
| Char. 35 | spelling “strength” |
| Chars. 34 - 38 | - to add explanation on how the characteristics are observed  - to check whether characteristics fulfill criteria of DUS characteristic |
| Char. 40 | - to check whether 9 notes are necessary  - to add example varieties |
| New chars. | to check whether to add the following new characteristics:  “Plant: growth type” with states “determinate”, “intermediate”, “indeterminate”  “Number of seeds per boll” with “low”, “medium”, “high” |
| Ad. 20 | to be displayed in grid |
| Ad. 23 | to be improved (see comment on Char. 23) |
| TQ 6 | to be completed |

*\*Elytrigia* (Elytrigia elongata *(Host) Nevski*)

The subgroup discussed document TG/ELYTR(proj.5), presented by Mr. Alberto Ballesteros (Argentina), and agreed the following:

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| General | - Leading Expert to confirm that all IP rights on photos, illustrations and text have been respected  - to add scheme explaining time of observation/growing cycles and revise characteristics (particularly QN characteristics) and explanations accordingly |
| Cover page | to change coverage of Test Guidelines to *Elytrigia pontica* (UPOV code ELTRG\_PON) |
| 2.3 | - to delete “for seed-propagated varieties”  - to select appropriate ASW version (without “In the case of seed”) |
| 4.2.3 | to delete “of seed-propagated varieties” |
| 5.3 | to include the grouping characteristics in the TQ |
| Table of Chars. | - to check whether to add (\*) to more characteristics  - to follow botanical order of presentation of characteristics |
| Char. 1 | - to be indicated as QN  - to be indicated as VG |
| Char. 2 | to read “rhizomes” (plural) |
| Char. 3 | - to read “Leaf: color”  - to be indicated as PQ  - to remove hyphen in “grey-green”  - to have notes 1 to 5 |
| Char. 4 | - to add (a)  - to be indicated as MS  - to remove capital letter in state “Very short”  - to add explanation on time of observation (see general comment on schema to be added) |
| Char. 5 | - to add (a)  - to add explanation on time of observation (see general comment on schema to be added) |
| Char. 6 | - to add (\*)  - to add (+) and explanation  - to read “Leaf sheath”  - to have notes 1 and 9 |
| Char. 7 | - to check whether state “high” to read “long”  - to be indicated as MS |
| Char. 9 | - to be indicated as QN  - to add state “medium”  - to have notes 1 to 3 |
| Char. 10 | - to read “Time of emergence of inflorescence”  - to add (\*) |
| Char. 11 | to remove hyphen in “brown-yellow” |
| 8.1 (a) | to be revised according the schema to explain time of observation/growing cycles (see general comment |
| 8.1 (b) | - to read “full”  - to read “Observations on flowers (spike) should be made at full flowering” |
| 8.1(c) | to read “Observations on leaves should be made before flowering on the middle third of the plant” |
| Ad. 1 | - to be revised according the schema to explain time of observation/growing cycles (see general comment)  - to check whether to read “Plant growth habit should be observed between 45 and 90 days after planting” |
| Ad. 2 | - to clarify time of observation (see general comment)  - to improve diagram and remove pictures  - to delete “removal of plants”  - to check whether to read “Rhizomes are white below soil and erect and green above soil” |
| Ads. 3, 4 and 5 | to clarify time of observation (see general comment) |
| Ads. 4 and 5 | to check whether to have a complete sentence “Observations should be made…” |
| Ad. 8 | to check whether to be replaced by the addition of explanation (b) covering several characteristics |
| Ad. 10 | to correct spelling |
| TQ 6 | to be completed |

*Field Bean (*Vicia faba *L. var. minor)*

The subgroup discussed document TG/8/7(proj.1), presented by Ms. Cheryl Turnbull (United Kingdom), and agreed the following:

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| General | - Leading Expert to confirm that all IP rights on photos, illustrations and text have been respected  - to add growth stage key |
| Common names | - to check whether to include English common name “Faba Bean”  - to check whether to include Spanish common name “Habín” |
| 3.1.2 | to be deleted |
| 4.2.3 | - to read “In the case of visual observation, 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 160 plants, 6 off-types are allowed.”  - to delete second paragraph  - to add numbering to last paragraph |
| Table of Chars. | to add example varieties |
| Char. 2 | to check whether QN |
| Chars. 3, 4 | - to be indicated as VG/MS  - to have three states from small to large only |
| Char. 5 | to be deleted |
| Char. 6 | to be indicated as MG/MS |
| Char. 8 | to have order of states “yellow”, “brown”, “black” |
| Chars. 9, 10, 11 | check whether to be combined |
| Char. 11 | - to check whether to have notes 1, 3, 5  - to check whether state one to read “absent or very weak” |
| New Char. | to check whether to add a new char. after Char. 12 to read “Flower: length in relation to standard” |
| Char. 13 | - to check whether to read “Sepal: length”  - to replace “large” with “long” |
| Char. 15 | to add (+) and illustration |
| Chars. 16, 17, 18 | to check wording “wing” and provide improved illustration for the wing |
| Char. 18 | to add (+) and illustration |
| Char. 24 | to read “Only varieties with: wing: melanin spot: present: Stem: anthocyanin coloration” |
| Char. 28 | to have notes 1 to 9 |
| Chars. 29, 30 | to move text in brackets to Chapter 8.2 |
| Char. 30 | to add (+) and to move “(from suture to suture)” to explanation in Ad. 30 |
| Char. 31 | to add (+) and illustration |
| Char. 32 | to delete MS |
| Char. 33 | to have notes 1, 3, 5 |
| Chars. 34 - 37 | to delete “dry” |
| Char. 36 | to remove state “mixed”  to have notes 1 and 9 |
| New char. | to check whether to add new char “Pod: attitude” |
| Ad. 16 | to precise point of observation |
| Ad. 25 | to be improved |
| Ad. 36 | to be replaced with explanation of current adopted version |
| TQ 5 | to add Char. 36 (grouping char.) |
| TQ 6 | to be completed |

*Oats (*Avena sativa *L. &* Avena nuda *L.)*

The subgroup discussed document TG/20/8(proj.1), presented by Mr. Antonio Escolano García (Spain). The TWA agreed the following:

|  |  |
| --- | --- |
| General | - document reference for next draft to be corrected TG/20/11(proj.2)  - Leading Expert to confirm that all IP rights on photos, illustrations and text have been respected  - to add growth stage key |
| 1. | to read “… Avena nuda L. and Avena sativa L.” |
| 2.2 | to read “… seed and panicles, if requested.” |
| 2.3 | - to read “…  3 kg  Panicles: 120”  - to move sentence “The panicles should be well developed and should contain a sufficient number of viable seeds to establish a satisfactory row of plants for observation.” to the bottom of Chapter 2.3 |
| 4.2.3 | to delete “or parts of plants” in first sentence |
| 4.2.4 | to replace “ear-row” by “panicle row” |
| Table of Chars. | to add example varieties |
| Char. 2 | to check whether to extend growth stage until panicle emergence |
| Char. 3 | to read “Leaf blade: hairiness of margins” and add explanation “to be observed at leaf below flag leaf” |
| Char. 5 | to move text in brackets to explanation in Chapter 8.2 |
| Char. 6 | to add explanation that very few hairs can be considered as “present” |
| Char. 7 | - to check whether to reduce scale  - to add explanation that the strongest expression should be recorded |
| Char. 9 | to be moved before Char. 8 |
| Chars. 9, 10 | to read “Glume” (singular) |
| Char. 10 | to check whether to have notes 1, 3, 5 |
| Char. 11 | - to delete “intensity”  - to add explanation or illustration  - to check whether to have notes 1 to 5 |
| Char. 13 | to check whether to have notes 1 to 5 |
| Char. 16 | to replace MG by VG |
| Char. 17 | - spelling “color”  - to check whether can also be observed at growth stage 00 (on submitted seed); if so, to become Char. 1 |
| Char. 18 | to check whether to reduce scale to 3 or 5 notes |
| Char. 20 | to check whether to reduce scale to 3 or 5 notes |
| Char. 21 | to add explanation (see TG Wheat) |
| New chars. | to check whether to include the following characteristics:  “Flag leaf: glaucosity of sheath” (notes 1-9, growth stage 60-66, VG/B, QN)  panicle: orientation of branches (states 1 “divergent”, 2 “semi divergent”, 3 “one sided”, - states to be checked for appropriate botanical terminology; growth stage 70-75, VG/B, QN) |
| TQ 4 | to select Standard Wording for breeding scheme as appropriate |
| TQ 5 | - to complete list with even states of expression  - to check whether to add Chars. 2, 5, 12 as grouping Chars. |
| TQ 6 | to be completed |

*Quinoa (*Chenopodium quinoa *Willd.)*

The subgroup discussed document TG/CHENO(proj.2), presented by Mr. Erik Lawaetz (Denmark), and agreed the following:

|  |  |
| --- | --- |
| General | Leading Expert to confirm that all IP rights on photos, illustrations and text have been respected |
| Cover page | to check whether to delete English common name “Pigweed” |
| 4.1.4 | number of parts to be taken from each plant to be indicated as 1 |
| 4.2.2 | to check whether population standard should be reduced (FR= 1%) |
| Table of Chars. | - General: to check approach to color characteristics and possibility to separate anthocyanin from color  - to add example varieties  - to check whether to add more (\*) |
| Char. 1 | - to check whether to have states “light green”, “medium green”, “dark green”, “red”, “purple”  - to delete “main” if Char. 7 is deleted |
| Char. 2 | to be deleted |
| Char. 4 | - to be moved after Char. 6  - to delete MG |
| Chars. 4, 5 | to delete “A” |
| Char. 5 | - to be indicated as PQ  - to add state “intermediate” |
| Char. 6 | - to read “Leaf: dentation on margin”  - to add explanation that to be observed in the middle part of the plant |
| Char. 7 | to check whether to be deleted |
| Char. 8 | to be moved after Char. 13 |
| Char. 10 | to delete “A” |
| Char. 11 | to replace “long” with “tall”  to read “Plant: height at beginning of flowering” |
| Char. 12 | - to read “Stem: color”  - to delete “A” |
| Char. 13 | - to read “Stem: color of stripes”  - to check whether to add state “yellow” (to check whether “yellow” or “orange” is correct)  - to change order of states from pink to red |
| Char. 14 | - to read “Inflorescence: shape of clusters”  - to check botanical terms for the states of expression/clusters |
| Char. 15 | to check correlation with Char. 17 |
| Char. 17 | - to check whether QN  - to check for the appropriate botanical terms |
| Char. 19 | to delete “at maturity” and add (+) and explanation on time of observation |
| Char. 20 | - to delete “A”  - to delete MG |
| Char. 21 | - state 3 to read “light brown”  - to add new state “yellow”  - to follow order of colors according to TGP/14 (red, grey, black) |
| 8.1 (a) | to check proprietary rights |
| 8.1 | - to add new explanation for characteristics 4, 6, 8 that to be observed in the middle part of the plant  - to check whether to add explanation of panicle (where does the panicle start in the plant?) |
| Ad. 3 | to be deleted |
| Ad. 5 | to add explanation that to be observed on lower leaves |
| Ad. 9 | to correct spelling of inflorescence |
| Ad. 15 | to add explanation that the number of branches with inflorescences should be observed |
| TQ. 4.2 | to select appropriate standard wording on method of propagation |
| TQ 6 | to add example |

*Soya Bean (*Glycine max *(L.) Merrill)*

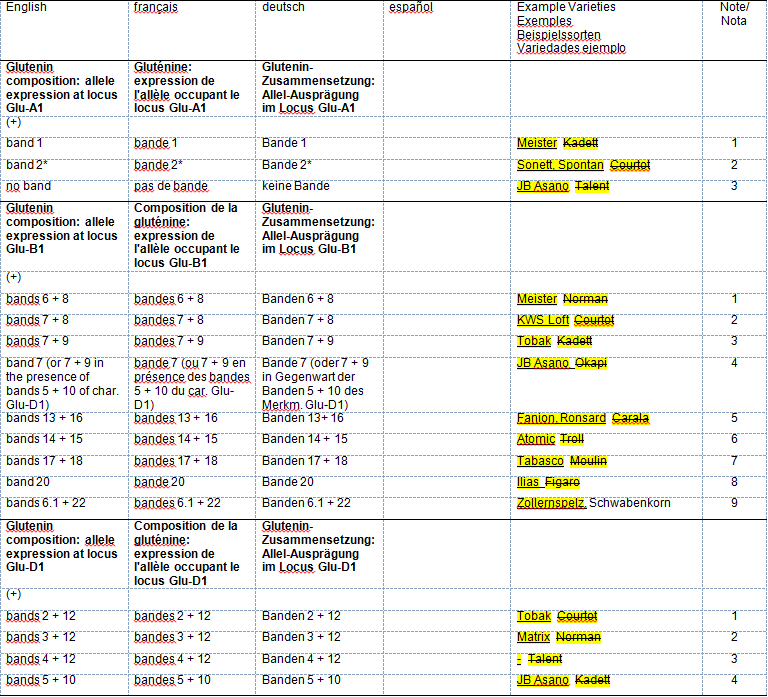
The subgroup discussed document TG/80/7(proj.1), presented by Mr. Alberto Ballesteros (Argentina), and agreed the following:

|  |  |
| --- | --- |
| General | Leading Expert to confirm that all IP rights on photos, illustrations and text have been respected |
| 2.3 | to check whether quantity of plant material needs to be revised |
| 3.1.1 | to use Standard Wording |
| 3.4.1 | to check whether to reduce number of plants to 100 plants |
| 4.2.2 | - to be reviewed  - to keep compatibility with number of plants (if changed to 100 plants in Chapter 3.4.1 population standard should be 1% and 3 off-types allowed?) |
| Table of Chars. | - to remove capital letters for example variety denominations (except codes)  - add growth stage key from current adopted version  - to order characteristics by botanical order  - disease resistance protocols to be presented in appropriate table (see TGP/12)  - to check to which chars. to add (\*) (add (\*) to all grouping chars.)  - to check availability of non-GM varieties for example varieties |
| Char. 1 | - to be indicated as PQ  - to replace “bronze” by “orange brown”  - to check whether to read “Hypocotyl: intensity of anthocyanin coloration” with states from “absent or light” to “dark” |
| Char. 2 | - to be indicated as PQ  - to remove hyphens  - to delete state “semi-determinate to determinate” |
| Char. 3 | to be indicated as QN  to remove hyphens |
| Char. 4 | - to read “Main stem: color of hairs”  - to add (+) and explanation on location of part to be observed (middle third)  - to use appropriate color name for “tawny” (dark red, brown red?) |
| Chars. 4, 5 | to check whether to be combined as a PQ characteristic |
| Char. 7 | to have notes 1 to 5 |
| Char. 8 | to add (+) and explanation (grid) |
| Char. 9 | to check whether to be indicated as VS/MS and add (+) and explanation on how measurements are taken |
| Char. 10 | - to add (+) and explanation (grid)  - to be indicated as PQ |
| Char. 11 | - to have notes 1 to 5  - to add (+) and explanation on how to be observed |
| Char. 12 | to be indicated as VG |
| Char. 13 | - to check whether “Pod: tanning” or to use appropriate color names  - to check whether to add states “grey”, “brown”, “black” (see current adopted version of TG)  - to check whether to be deleted (see comment on Char. 14) |
| Char. 14 | to check whether to read as Char. 12 in currently adopted version |
| Char. 15 | to add (+) and explanation |
| Char. 16 | - to be indicated as PQ  - to add (+) and illustration (grid) |
| Char. 17 | - to add (+) and explanation (ground color / over color)  state 7 to read “black”  - to add relevant states from Char. 18 |
| Char. 18 | to be deleted |
| New Char. | to check whether to add new Characteristic “Seed: glaucosity” after Char. 17 with states from “weak” to “strong” and notes 1 to 3 |
| Char. 20 | - to delete state 2 “mixture”  - to check whether to read “Seed: peroxidase reaction”  - to add (+) and explanation from current adopted version |
| Char. 21 | - state 4 to read “medium brown”  - to delete state 8 “light or intermediate brown and imperfect black”  - to add (+) and explanation  - to check whether to add states “imperfect yellow”, “light black”, “mixed” |
| Char. 22 | to check whether to be indicated as PQ and a third states can be added |
| Char. 23 | - to move text in brackets to explanation  - to check whether to add other varieties to for remaining states of expression or to redistribute varieties across the range of the characteristic |
| Char. 25 | - to be deleted  - to check with the author of the “American Scale” to open the scale for including other varieties with earlier maturity groups and whether to move to Chapter TQ 7.3 |
| Char. 26-37 | - to read “Resistance to…”  - to add (+) and explanation on the testing protocol  - to delete all disease resistance characteristics |
| 8.1 (a) | to check allocation of (a) throughout table of characteristics |
| 8.2 | General comment: to be revised according to changes in Table of Characteristics |
| Ad. 1 | to check whether to delete all illustrations of color |
| Ad. 2 | to check whether to delete first two sentences or full explanation |
| Ad. 5 | to check whether to be replaced by drawings |
| 4.2 | to select options from standard wording |
| TQ 5 | to add Characteristics 2, 12, 21, 25 |
| TQ 6 | to be completed |

*\*Wheat* (Triticum aestivum *L. emend. Fiori et Paol.*) *(Revision)*

The subgroup discussed document TG/3/12(proj.4), presented by Ms. Beate Rücker (Germany), on behalf of the Leading Expert, Ms. Virginie Bertoux (France), and agreed the following:

|  |  |
| --- | --- |
| General | Leading Expert to confirm that all IP rights on photos, illustrations and text have been respected |
| 2.2 | to read “… in the form of seed and ears (if requested).” |
| 2.3 | to delete “(if requested )” after “Ears” |
| 4.2.7 | to replace “declared” by “considered” (twice) |
| 4.2.8 | to read “For the assessment of uniformity of single hybrids, a population standard of 10% and an acceptance probability of at least 95% should be applied. In case of characteristics indicated by B, the sample size for the assessment of uniformity maybe reduced to 200 plants. In case of a sample size of 200 plants, 27 off‑types are allowed. In case of a sample size of 100 ear rows, plants or parts of plants, 15 off‑types are allowed.” |
| 5.3 (a) | to be deleted |
| Table of Chars. | to provide new set of example varieties (to reduce number of example varieties) |
| Char. 6 | to have states (1) absent or weak, (2) medium, (3) strong |
| Char. 19 | growth stage to be indicated as 80-92 |
| Char. 22 | state 5 to read “horizontal” |
| Char. 23 | to read “Lower glume: length of beak” |
| Char. 24 | to read “Lower glume: shape of beak” |
| Char. 26 | - growth stage to be indicated as 69 - 92  - to be moved after Char. 11  - to be indicated as VG/B |
| 8.1 (a) | to read “Characteristics of lower glume should be observed on spikelets in the midthird of ear” |
| Ad. 1 | to read “Seed color should be observed on dry seeds or by using NaOH solution (seeds soaked for 10 minutes at 60°C or 60 minutes at room temperature in a 5M NaOH solution).” |
| Ad. 2 | - first sentence to read “Not possible to be observed on purple or bluish seeds.”  - to delete line for “Scale of recording”  - last sentence to read “Any alternative method may be used if it gives the same results.” |
| Ad. 3 | last sentence to read “Any alternative method may be used if it gives the same results.” |
| Ad. 5 | - explanation for state 1 to read “all or almost all flag leaves are rectilinear”  - explanation for state 9 to read “almost all or all flag leaves are recurved”  - no pictures to be included |
| Ad. 6 | to add “The” at beginning of sentence” |
| Ad. 7 | to read “Time of ear emergences is reached when the …” |
| Ad. 13 | text to read “Pith in cross section should be observed half way between base of ear and uppermost node. All stems of the plant should be checked and the highest score per plant recorded.” |
| Ad. 27 | to check formatting of third paragraph (three hyphens) |
| TQ 4.2 | “Other” to be moved to (c) and delete (d) |
| Annex, introduction | - to replace “UPOV member States” by “UPOV members”  - second sentence of second paragraph to read “Any alternative method may be used if it gives the same results”.  - to delete last sentence |
| Annex | - to read “5. Recognition of Glutenin Allels”  - to reintroduce scheme specifying genotypes from previously adopted version  - to check whether to replace current example varieties with the following ones: |



## Information and databases

### (a) UPOV information databases

The TWA considered document TWA/44/5.

#### GENIE database

The TWA noted the information on allocation of crop type(s) for UPOV codes used in the PLUTO database as of June 26, 2014.

The TWA noted that information on crop type(s) had been introduced in the GENIE database and that the GENIE database had been modified to show the crop type(s) for each UPOV Code.

The TWA noted that a standard report for TWP allocations for UPOV codes had been introduced on the GENIE webpage.

The TWA noted that allocation of crop type(s) for further UPOV codes would occur when UPOV codes were used in the PLUTO database for the first time.

The TWA noted the request to check the UPOV codes used in the PLUTO database for the first time, since June 26, 2014, as provided in Annex III, part C to document TWA/44/5 (available on the TWA/44 website) and to submit comments to the Office of the Union by August 15, 2015.

#### UPOV code system

The TWA noted the request to check the amendments to UPOV codes, as provided in Annex III, part A, to document TWA/44/5.

The TWA noted the request to check the new UPOV codes or new information added for existing UPOV codes, as provided in Annex III, part B, to document TWA/44/5.

The TWA noted the request to submit comments on Annex III, parts A “UPOV codes amendments to be checked” and B “New UPOV codes or new information”, to the Office of the Union by August 15, 2015.

#### PLUTO Database

The TWA noted the summary of contributions to the PLUTO database from 2012 to 2014 and the current situation of members of the Union on data contribution, as presented in Annex II to document TWA/44/5.

The TWA noted that an additional column in the PLUTO search screen, showing the date on which the information was provided, had been introduced.

The TWA noted that both the “Denomination” and “Breeder’s Ref” fields had been made searchable, independently or in combination, by denomination search tools on the “Denomination Search” page of the PLUTO database.

The TWA noted the information concerning the training course “Contributing data to the PLUTO database”, held in Geneva in December 2014 and the plans to organize three further courses, in English, French and Spanish, from September 7 to 9, 2015, from November 23 to 25, 2015, and from October 5 to 7, 2015, respectively.

### (b) Variety description databases

The TWA considered document TWA/44/6.

The TWA noted that the TWC had invited an expert from China to present the analysis of variance for the interaction “variety x location” (environment) of the QN characteristics considered in the study using the statistical module of the new software “DUSTC” developed by China, at its thirty-third session.

The TWA noted that the TC had agreed to include a discussion item on facilitating the development of databases at its fifty-second session.

### (c) Exchange and use of software and equipment

The TWA considered document TWA/44/7.

The TWA noted that the Council, at its forty-eighth ordinary session, had adopted the revision of document UPOV/INF/16 “Exchangeable Software” (document UPOV/INF/16/4 on the basis of document UPOV/INF/16/4 Draft 1).

The TWA noted that discussions on the inclusion of the SISNAVA software in document UPOV/INF/16 would be continued in the TWC, subject to the conclusion on discussions on the variation of variety descriptions over years in different locations.

The TWA noted that the TC, at its fifty-first session, and the CAJ, at its seventy-first session, had agreed the proposed revision of document UPOV/INF/16/4 concerning the inclusion of information on the use of software by members of the Union in conjunction with the comments of the TC, as set out in Annex I to document TWA/44/7 and that a draft of document UPOV/INF/16/5 “Exchangeable Software” would be presented for adoption by the Council at its forty-ninth ordinary session.

The TWA noted that the Council, at its forty-eighth ordinary session, had adopted document UPOV/INF/22 “Software and equipment used by members of the Union” (document UPOV/INF/22/1).

The TWA noted that the TC, at its fifty-first session, and the CAJ, at its seventy-first session, had agreed the proposed revision of document UPOV/INF/22/1 concerning software and equipment used by members of the Union in conjunction with the comments of the TC, as set out in Annex II to document TWA/44/7, and that a draft of document UPOV/INF/22 would be presented for adoption by the Council at its forty-ninth ordinary session.

### (d) Electronic application systems

The TWA noted the information provided in document TWA/44/8 and received a report on latest developments by the Office of the Union on the development of a prototype electronic application form, via video link, a copy of which would be provided as an addendum to document TWA/44/8.

## Recommendations on draft Test Guidelines

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

The TWA agreed that no draft Test Guidelines would be submitted to the TC for adoption at its fifty‑second session, to be held in Geneva in March 2016.

*(b) Test Guidelines to be discussed at the forty‑fifth session*

The TWA agreed to discuss the following draft Test Guidelines at its forty‑fifth session:

|  |
| --- |
| Barley (*Hordeum vulgare* L. *sensu lato*) |
| Castor Bean (*Ricinus comunis* L.) |
| Cotton (*Gossypium* L.) |
| Elytrigia (*Elytrigia elongata* (Host) Nevski),  (*Agropyron elongatum* (Host) P. Beauv.) |
| Field Bean (*Vicia faba* L. var. minor) |
| Oats (*Avena sativa* L. & *Avena nuda* L.) |
| Quinoa (*Chenopodium quinoa* Willd.) |
| Red Clover (*Trifolium pratense* L.) |
| \*[[1]](#footnote-2)Scorpion Weed (*Phacelia tanacetifolia* Benth.) |
| Soya Bean (*Glycine max* (L.) Merrill) |
| \*Wheat (*Triticum aestivum* L. emend. Fiori et Paol*.*) (Revision) |

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

*(c) Possible Test Guidelines to be discussed in 2017*

The TWA expressed its interest to consider drafts of the following Test Guidelines in 2017:

|  |
| --- |
| Finger millet (*Eleusine coracana* (L.) Gaertn.) |
| Ginseng (*Panax ginseng* C.A. Mey.) (Revision) (document TG/224/1) |

The TWA noted that the Office of the Union had been contacted by the International Rice Research Institute (IRRI) with a view to the possibility of initiating a revision of the Test Guidelines for Rice (document TG/16/8). The TWA agreed that the information submitted by IRRI to the Office of the Union should be circulated for consideration by the TWA.

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

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 Vegetables (TWV), subject to the deadlines agreed in document TWV/49/32 “Report”, Annex IV:

|  |  |
| --- | --- |
| Subject | Interested experts (countries/organizations) [[2]](#footnote-3) |
| Brown Mustard (*Brassica juncea* (L.) Czern.) | DE, ES, GB, QZ |
| Turnip (*Brassica rapa* L. var. *rapa* (L.) Thell.) | DE, FI, GB, JP, NZ, QZ |

## Guidance for drafters of Test Guidelines

The TWA considered document TWA/44/11.

The TWA agreed with the plan to update the TG drafters’ webpage to provide the following information as set out in paragraph 11 of document TWA/44/11:

Web-based TG Template

Additional characteristics

Summary information on quantity of plant material required on adopted Test Guidelines

Test Guidelines under development (reference to document TC/[xx]/2)

Shapes extract from document TGP/14

## Date and place of the next session

At the invitation of Mexico, the TWA agreed to hold its forty-fifth session in Queretaro, Mexico, from July 11 to 15, 2016, with the preparatory workshop on July 10, 2016.

## Future program

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

1. Opening of the Session
2. Adoption of the agenda
3. Short reports on developments in plant variety protection
4. Reports from members and observers
5. Reports on developments within UPOV (oral report by the Office of the Union)
6. Molecular Techniques (document to be prepared by the Office of the Union)
7. TGP documents
8. Variety denominations (document to be prepared by the Office of the Union)
9. Information and databases

(a) UPOV information databases (document to be prepared by the Office of the Union)

(b) Variety description databases (document to be prepared by the Office of the Union and documents invited)

(c) Exchangeable software (documents to be prepared by the Office of the Union)

(d) Electronic application systems (document to be prepared by the Office of the Union)

1. Uniformity assessment
2. Experiences on matters concerning variety descriptions (documents to be prepared by Australia, European Union and Germany and documents invited)
3. Experiences with new types and species
4. Impact of endophytes on DUS characteristics in grasses (document to be prepared by the European Union and documents invited)
5. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if appropriate)
6. Discussion on draft Test Guidelines (Subgroups)
7. Recommendations on draft Test Guidelines
8. Guidance for drafters of Test Guidelines
9. Date and place of the next session
10. Future program
11. Report on the session (if time permits)
12. Closing of the session

Visit

On the afternoon of July 8, 2015, the TWA visited the Hokkaido Agricultural Research Center (HARC) of the National Agriculture and Food Research Organization (NARO) in Memuro, Kasai-gun, Hokkaido. The TWA was welcomed by Mr. Masayuki Hirafuji, Director, HARC, NARO, who gave a presentation on NARO and HARC in Memuro. A copy of the presentation is provided in Annex V to this report. The TWA also received the following presentations, copies of which are provided in Annex V to this report:

|  |  |
| --- | --- |
| Activities of NARO HARC wheat breeding group | Mr. Koichi Hatta, Group Leader Wheat Breeding Group, HARC, NARO |
| Sugar beet in Japan: breeding a disease resistant variety “Hokkaido 101” | Mr. Yosuke Kuroda, Senior Researcher, HARC, NARO |
| Breeding of new potato varieties in Japan | Mr. Kenji Asano, Researcher, HARC, NARO |
| Seed potato production system in Japan, starting from Foundation Seed | Mr. Tukasa Kawakami, International Affairs Coordinator, NCSS |
| Bean breeding at Tokachi Agricultural Station | Mr. Hisanori Shimada, Senior Research Manager of Bean Breeding Group, Tokachi Agricultural Experiment Station |

The TWA also visited field trials for sugar beet, potato, winter wheat, adzuki bean and common bean at the Tokachi Agricultural Experiment Station.

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

[Annexes follow]

Annexes I to V

[Annexes I to V only available in the pdf version of the document]

[Annex VI follows]

ANNEX VI

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWA/45

**(\* indicates possible final draft Test Guidelines)**

Guideline date for Subgroup draft to be circulated by Leading Expert: **April 1, 2016**

Guideline date for comments to Leading Expert by Subgroup: **April 29, 2016**

New draft to be submitted to the Office of the Union

**before May 27, 2016**

| Species | Basic Document | Leading expert(s) | Interested experts (countries/organizations) [[3]](#footnote-4) |
| --- | --- | --- | --- |
| Barley (*Hordeum vulgare* L. *sensu lato*) | TG/19/10 | Ms. Beate Ruecker (DE) | AU, AR, CA, CZ, DK, ES, FI, GB, JP, IT, NL, NZ, KR, QZ, SK, CLI, ESA, ISF |
| Castor Bean  (*Ricinus comunis* L.) | TG/RICIN(proj.1) | Mr. Adriaan de Villiers (ZA) | AR, BG, BR, FR, IT, QZ, UA, ESA, ISF, Office |
| Cotton (*Gossypium* L.) | TG/88/7(proj.1) | Mr. Luis Salaices (ES) | AR, AU, BR, CN, CO, ES, JP, KE, QZ, TZ, VN, ZA, CLI, ESA, ISF, Office |
| Elytrigia (*Elytrigia elongata* (Host) Nevski), (*Agropyron elongatum* (Host) P. Beauv.) | TG/ELYTR(proj.5) | Mr. Alberto Ballesteros (AR) | HU, PL, QZ, ESA, ISF, Office |
| Field Bean (*Vicia faba* L. var. *minor*) | TG/8/7(proj.1) | Ms. Cheryl Turnbull (GB) | AR, AU, CA, CO, CZ, DE, DK, ES, FR, GB, IT, NL, QZ, ZA, CLI, ESA, Office |
| Oats (*Avena sativa* L. & *Avena nuda* L.) | TG/20/8(proj.1) | Mr. Antonio Escolano (ES) | AR, AU, BR, CA, CN, CO, CZ, DE, DK, ES, FI, FR, GB, IT, JP, KR, NL, QZ, SK, UY, ZA, ESA, ISF, Office |
| Quinoa (*Chenopodium quinoa* Willd.) | TG/CHENO(proj.2) | Mr. Erik Lawaetz (DK) | AR, BR, CA, CL, CO, ES, FR, KR, NL, QZ, ZA, ESA, ISF, Office |
| Red Clover (*Trifolium pratense* L.) | TG/5/7 | Ms. Robyn Hierse (ZA) | AR, AU, BR, CZ, DE, DK, ES, FI, FR, GB, IT, JP, NZ, QZ, SK, UY, ZA, CLI, ESA, ISF, Office |
| \*[[4]](#footnote-5)Scorpion Weed (*Phacelia tanacetifolia* Benth.) | TG/PHACE(proj.3) | Ms. Bogna Kowalczyk (PL) | AT, CZ, DE, FR, QZ, RO, ESA, ISF, Office |
| Soya Bean (*Glycine max* (L.) Merrill) | TG/80/7(proj.1) | Mr. Alberto Ballesteros (AR) | AR, AU, BR, CA, CN, CO, ES, FR, IT, JP, KR, NL, PY, QZ, SK, UY, VN, CLI, ESA, ISF, Office |
| \*Wheat (*Triticum aestivum L. emend. Fiori et Paol.*) (Revision) | TG/3/12(proj.3) | Ms. Virginie Bertoux (FR) | AR, AT, AU, BG, BR, CA, CL, CN, CZ, DE, DK, ES, FI, GB, HR, HU, IT, JP, KE, KR, NL, NZ, PL, QZ, RO, SK, UA, ZA, CLI, ESA, ISF, Office |

[End of Annex VI and of report]

1. possible final draft Test Guidelines [↑](#footnote-ref-2)
2. for name of experts, see list of participants [↑](#footnote-ref-3)
3. for name of experts, see list of participants [↑](#footnote-ref-4)
4. \* possible final draft Test Guidelines [↑](#footnote-ref-5)