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UPOV

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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

TECHNICAL WORKING PARTY FOR AGRICULTURAL CROPS

Forty-Second Session
Kyiv, Ukraine, June 17 to 21, 2013

REPORT

adopted by the Technical Working Party for Agricultural Crops

1. The Technical Working Party for Agricultural Crops (TWA) held its forty-second session in Kyiv, Ukraine, from June 17 to 21, 2013. The list of participants is provided in Annex I to this report.

2. The TWA was welcomed by Mrs. Nataliya Khrapiychuk, Head of Seed Production Section of Agriculture Department, Ministry of Agrarian Policy and Food of Ukraine. A copy of the presentation on "State and Prospects of Crop Production in Ukraine" made by Mrs. Khrapiychuk is provided in Annex II to this report. Mr. Petro Vasyliuk, Director, Ukrainian Institute for Plant Variety Examination, also welcomed the participants and made a presentation on "Right Protection for Plant Variety in Ukraine". A copy of the presentation by Mr. Vasyliuk is provided in Annex III to this report. Mrs. Svitlana Gryniv, Head of Department for Qualifying Examination of Plant Varieties on Distinctness, Uniformity and Stability welcomed the participants and made a presentation on "Qualifying Examination on Distinctness, Uniformity and Stability", a copy of which is contained in Annex IV to this report.

3. The session was opened by Mrs. Robyn Hierse (South Africa), Chairperson of the TWA, who welcomed the participants, in particular new participants to the TWA, and thanked Ukraine for hosting the TWA session.

Adoption of the Agenda

4. The TWA adopted the agenda as presented in document TWA/42/1 Rev..

Short Reports on Developments in Plant Variety Protection

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

5. The TWA noted the information on developments in plant variety protection from members and observers provided in document TWA/42/28 Prov.. The TWA noted that reports submitted to the Office of the Union after June 10, 2013, would be included in the final version of document TWA/42/28.

(b) Reports on developments within UPOV

6. The TWA received a presentation from the Office of the Union on the latest developments within UPOV, a copy of which is provided in document TWA/42/27.

7. The TWA received a presentation from the Office of the Union on the results of the 2012 survey to seek views on the effectiveness of the Technical Working Parties, as requested by the TC at its forty-ninth session, a copy of which is provided in document TWA/42/27 Add..

Molecular Techniques

8. The TWA considered document TWA/42/2.

9. The TWA noted the program for the adoption of document TGP/15/1 “Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)”.

10. The TWA noted the discussion on molecular techniques at the forty-ninth session of the TC.

11. The TWA noted that the TC had proposed to hold a coordinated meeting of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) with the International Organization for Standardization (ISO), the International Seed Testing Association (ISTA) and the Organization for Economic Co-Operation and Development (OECD) and including breeders; and that if it was not possible to organize a coordinated meeting in 2014, a meeting of the BMT would be organized in the meantime.

12. The TWA agreed with the TC that there was a need to provide suitable information on the situation in UPOV with regard to the use of molecular techniques to a wider audience, including breeders and the public in general.

TGP documents

13. The TWA considered the TGP documents below on the basis of documents TWA/42/3 and TWA/42/3 Add..

14. The TWA noted the agreement of the TC and the CAJ to submit document TGP/15/1 “Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)” for adoption by the Council, at its forty-seventh session, to be held on October 24, 2013.

15. The TWA noted the agreement of the TC and the CAJ to invite the Council to adopt document TGP/14/2 “Glossary of Terms Used in UPOV Documents” at its forty-seventh session, to be held on October 24, 2013, and noted that the Council would be invited to adopt document TGP/0/6, in order to reflect the adoption of documents TGP/15/1 and TGP/14/2. The TWA received a presentation by the Office of the Union, on the main changes and key features on TGP/14, proposed by the TC at its forty-ninth session in 2013.

16. The TWA noted the matters approved by the TC for future revision of documents TGP/7, TGP/8 and TGP/9, as set out below:

(a) TGP/7: Development of Test Guidelines

(i) *Coverage of Types of Varieties in Test Guidelines*
(ii) *Selection of Asterisked Characteristics*
(iii) *Standard References in the Technical Questionnaire*
(iv) *Applications for Varieties with Low Germination*
(v) *Procedure for the Development of Test Guidelines*
(vi) *Quantity of Plant Material Required*
(vii) *Minimum Quantity of Plant Material*
(viii) *Guidance on Number of Plants to be Examined (for Distinctness)*
(ix) *Guidance for Method of Observation*
(x) *Example Varieties*
(xi) *Providing Photographs with the Technical Questionnaire*
(xii) *Duration of Test*
(xiii) *Number of Plants Required for Description*

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

Part I: DUS Trial Design and Data Analysis

(i) *New Section 2: “Data to be recorded”*
(ii) *New Section: “Reduction of Size of Trials”*

Part II: Techniques Used in DUS Examination

(i) *Section 3: "The Combined-Over-Years Criteria for Distinctness (COYD)"*
(ii) *Section 3, Subsection 3.6: "Adapting COYD to special circumstances"*
(iii) *Section 4: "2x1% Method-Minimum Number of Degrees of Freedom for the 2x1% Method"*

(c) TGP/9: Examining Distinctness

(i) *Guidance on Number of Plants to be Examined (for Distinctness)*
(ii) *Providing Photographs with the Technical Questionnaire*

17. The TWA noted the agreement of the TC that a draft revision of document TGP/5 Section 10 "Notification of Additional Characteristics and States of Expression" be presented for consideration by the TC at its fiftieth session, subject to the conclusion of discussions on disclaimers on UPOV documents in the Consultative Committee.

18. The TWA also noted the matters for discussion on future revision of documents TGP/7, TGP/8 and TGP/14 that would be considered on basis of documents TWA/42/9 to TWA/42/21 and TWA/42/23.

19. The TWA noted the program for the development of TGP documents, as set out in the Annex to document TWA/42/3.

20. The TWA considered the TGP documents below on the basis of documents TWA/42/3 and TWA/42/3 Add. "Addendum to TGP documents".

TGP/7: Development of Test Guidelines

(i) Revision of document TGP/7: Additional Standard Wording for Growing Cycle for Tropical Species

21. The TWA noted the information provided in document TWA/42/9.

22. The TWA considered the proposed Additional Standard Wording (ASW) for growing cycle of tropical species and proposed to delete the words "active flowering and" from the text proposed by the Technical Working Party for Fruit Crops (TWF):

New (after (b)): ~~Tropical fruit species~~ Evergreen species with indeterminate growth The growing cycle is considered to be the period ranging from the beginning of flowering of an individual flower or inflorescence, through ~~active flowering and~~ fruit development, and concluding with the harvesting of fruit.

23. The TWA requested that the relationship between an individual flower and the harvesting of fruit be clarified by the drafter of the proposal.

(ii) Revision of document TGP/7: Source of Propagating Material

24. The TWA considered the proposed guidance on source of propagating material, as presented in Section IV "Guidance for drafting Test Guidelines" of the Annex to document TWA/42/10.

25. The TWA agreed with the TWO that it would not be appropriate to seek to insert additional standard wording on source of propagating material in the Technical Questionnaire, Section 9.2. The TWA noted that the document provided useful information on the effects of the source of propagating material as general guidance for drafters of Test Guidelines, for inclusion in document TGP/7, and requested the expert from the European Union, with the support of experts from France and the Netherlands, to prepare a condensed version of the wording to be presented to the TWA at its forty-third session in 2014. The TWA noted the effects of source of propagating material on agricultural crops, such as potato, which need to be taken into account for the assessment of DUS.

26. The TWA noted that the issues raised in document TWA/42/10 were different from the intentional use of chemicals (e.g. growth retardants) on all varieties included in the DUS trial. It recalled that the general issues were covered by the following section of document TG/1/3 "General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants" (see document TG/1/3, Chapter 2, Section 2.5.3):

> "The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides) effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc. In some cases (e.g. disease resistance), reaction to certain factors is intentionally used (see TG/1/3 Chapter 4, Section 4.6.1) as a characteristic in the DUS examination. However, where the factor is not intended for DUS examination, it is important that its influence does not distort the DUS examination. Accordingly, depending on the circumstances, the testing authority should ensure either that:
>
> (a) the varieties under test are all free of such factors or,
>
> (b) that all varieties included in the DUS test, including varieties of common knowledge, are subject to the same factor and that it has an equal effect on all varieties or,
>
> (c) in cases where a satisfactory examination could still be undertaken, the affected characteristics are excluded from the DUS examination unless the true expression of the characteristic of the plant genotype can be determined, notwithstanding the presence of the factor."

The TWA also recalled the guidance provided in document TGP/12 "Guidance on Certain Physiological Characteristics".

(iii) Revision of document TGP/7: Indication of Growth Stage in Test Guidelines

27. The TWA considered document TWA/42/11 and agreed with the TWO that the Additional Standard Wording 4 (ASW 4) should be amended in order to reflect the current practice in UPOV Test Guidelines to indicate growth states using letters, numbers and combinations of letters and numbers, to read as follows:

> "The optimum stage of development for the assessment of each characteristic is indicated by a ~~number~~ reference in the second column of the Table of Characteristics. The stages of development denoted by each ~~number~~ reference are described in Chapter 8 […]."

28. The TWA noted that GN 24 should be amended accordingly to reflect the proposed change in ASW 4, to replace the word "number" by "reference".

(iv) Revision of document TGP/7: Providing Illustrations of Color in Test Guidelines

29. The TWA considered document TWA/42/12.

30. The TWA agreed with the proposal of the TWO at its forty-sixth session, and the TWF at its forty-fourth session, to include the following guidance in a future revision of document TGP/7, with the deletion of "Leading Expert" and replacement of "UPOV member" by "environment", in the last sentence:

> "~~Particular caution is needed when considering the~~ It is generally not appropriate to use ~~of~~ illustrations of color, as such, in the Test Guidelines because the color in photographs can be affected by the technology of the camera, ~~and~~ the facilities used to display the photograph (including printer, computer and screen~~, etc.~~) and lighting conditions under which the photograph is taken. Furthermore, the expression of color may vary according to the environment in which the variety is grown. For example, a photograph of a "~~light~~ weak intensity" of anthocyanin coloration ~~provided by the Leading Expert~~ in one ~~UPOV member~~ environment may not represent a "~~light~~ weak intensity" of anthocyanin coloration in another ~~UPOV member~~ environment."

(v) Revision of document TGP/7: Presence of Leading Expert at Technical Working Party Sessions

31. The TWA considered document TWA/42/13 and agreed with the proposed guidance on the presence of a Leading Expert at a Technical Working Party session, for inclusion in a future revision of

document TGP/7, section 2.2.5.3, as amended by the TWF at its forty-fourth session, replacing "in an effective way" by "effectively", as set out below:

"2.2.5.3 Requirements for draft Test Guidelines to be considered by the Technical Working Parties

"Unless otherwise agreed at the TWP session, or thereafter by the TWP Chairperson, the timetable for the consideration of draft Test Guidelines by the Technical Working Parties is as follows:

Action	Latest date before the TWP session
Circulation of Subgroup draft by Leading Expert:	14 weeks
Comments to be received from Subgroup:	10 weeks
Sending of draft to the Office by the Leading Expert:	6 weeks
Posting of draft on the website by the Office:	4 weeks

"In cases where *either* of the deadlines for circulation of the Subgroup draft or for the sending of the draft to the Office by the Leading Expert is not met, the Test Guidelines would be withdrawn from the TWP agenda and the Office would inform the TWP accordingly at the earliest opportunity (i.e. not later than 4 weeks before the TWP session). In those cases where draft Test Guidelines are withdrawn from the TWP agenda because of failure by the Leading Expert to meet the relevant dates, it would be possible for specific matters concerning those Test Guidelines to be discussed at the TWP session. However, to consider specific matters it would be necessary for a document to be provided to the Office at least 6 weeks before the TWP session.

"In order to be considered by a Technical Working Party, the Leading Expert of the draft Test Guidelines should be present at the session, unless a suitable alternative expert can be arranged to act as the Leading Expert sufficiently in advance of the session, or unless the Leading Expert is able to participate ~~in an effective way~~ effectively by electronic means."

32. In that regard, the TWA proposed that a Deputy Leading Expert should be indicated, when selecting Test Guidelines for discussion, in order to act as an alternative to the Leading Expert.

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

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

33. The TWA considered document TWA/42/14.

34. The TWA noted that an expert from the Netherlands would draft, in conjunction with other experts, a proposed text with regard to further guidance on PQ and QN/MG characteristics, to be circulated to the groups of experts of the other interested Technical Working Parties (TWPs).

35. The TWA proposed TWA experts from Australia and the Netherlands to assist the drafter to develop further guidance on the proposed text to be included in TGP/8 part I: DUS Trial and Design and Data Analysis, New Section: Minimizing the Variation due to Different Observers, in a future revision of document TGP/8.

(ii) Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, Section 3: Method of Calculation of COYU

36. The TWA considered document TWA/42/15.

37. The TWA noted that:

(a) the TC had requested the TWC to continue its work with the aim of developing recommendations to the TC concerning the proposals to address the bias in the present method of calculation of COYU; and that

(b) a document on possible proposals for improvements to COYU was prepared for the TWC session in 2013.

38. The TWA supported the continuation of work of the TWC to improve the COYU method and noted that the TWC would provide information on the proposed changes to the COYU method and eventual consequences in DUS examination.

(iii) Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section 10: Minimum Number of Comparable Varieties for the Relative Variance Method

39. The TWA considered document TWA/42/16 and noted the comments made by the TWPs at their sessions in 2012 and the TC, at its forty-ninth session, held in 2013.

40. The TWA noted that the current thresholds in document TGP/8, Section 10 should be corrected, but agreed that the proposed text should not replace current paragraph 10.2.1. The TWA agreed that it would not be necessary to develop further guidance on the minimum number of comparable varieties in particular because it could cause confusion with the guidance provided in TGP/10, with regard to new types and species.

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

41. The TWA considered document TWA/42/17.

42. The TWA noted that the TC had agreed to replace the proposed text for new Section 11 “Examining DUS in Bulk Samples” in the Annex to document TC/49/28 with guidance on the use of characteristics examined on the basis of bulk samples, in order to ensure that the characteristics fulfill the basic requirements for a characteristic.

43. The TWA agreed that Leading Experts of Test Guidelines could be requested to provide data from different years to demonstrate that the expression of the characteristic is “sufficiently consistent and repeatable in a particular environment”.

(v) 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

44. The TWA considered document TWA/42/18.

45. The TWA considered the developments on a practical exercise with a common data set to produce variety descriptions of self-pollinated and/or vegetatively propagated varieties, in order to determine the aspects in common and divergence between methods, with a view to developing general guidance.

46. The TWA highlighted the importance of producing guidance for variety descriptions in general and agreed that the COY method was not used for producing variety descriptions but for assessing distinctness and uniformity.

47. The TWA agreed with the TWC that there was no guidance on data processing for the assessment of distinctness and for producing variety descriptions. The TWA supported the continuation of the practical exercise and the further steps agreed by the TWC.

48. The TWA agreed that, in parallel to the practical exercise, the expert from Germany should develop a text to explain the different forms that variety descriptions could take and the relevance of scale levels in that regard.

49. The TWA noted the interest of Italy to participate in the practical exercise with use of a common data set.

(vi) Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section: Guidance of Data Analysis for Blind Randomized Trials

50. The TWA considered document TWA/42/19.

51. The TWA noted the comments made by the TWPs at their sessions in 2012 and the TC-EDC in 2013, and considered the draft new Section on “Guidance for Data Analysis for Blind Randomized Trials.”

52. The TWA agreed that the drafter should further develop the guidance as set out in Annex II to document TWA/42/19 on draft guidance on data analysis for blind randomized trials for inclusion in a future revision of document TGP/8.

53. The TWA agreed that blind randomized trials were a useful method for specific circumstances and recalled the role of breeders in identifying their varieties and of DUS experts in the final decision of trials.

(vii) Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section: Examining characteristics using image analysis

54. The TWA considered document TWA/42/20.

55. The TWA noted the information on software and hardware used for image analysis, as set out in Annex I to document TWA/42/20.

56. The TWA noted that the AIM software for image analysis would be considered in document TWA/42/7 “Exchangeable software”.

57. The TWA noted that a draft of the new section “Examining Characteristics Using Image Analysis” for document TGP/8 would be presented to the TWC in 2013.

(viii) Revision of document TGP/8: Part II: Selected Techniques Used in DUS Examination, New Section: Statistical methods for visually observed characteristics

58. The TWA considered document TWA/42/23.

59. The TWA noted that the TC had:

(a) agreed that it would not be appropriate to continue the development of a section on “Statistical Methods for Visually Observed Characteristics”, unless new guidance was provided beyond the methods already provided in document TGP/8; and

(b) requested the TWC to clarify if it proposed to modify an existing method or provide a new additional method.

60. The TWA noted the memorandum presented in Annex I to document TWA/42/23 and the comments by the TWC that clarified that the method which was proposed to the TC, at its forty-ninth session, to deal with multinomial distributed data was a new method.

61. The TWA agreed with the TWC that it would be beneficial to further develop the method for multinomial data and to compare the decisions made using the two methods based on real data from Finland and the United Kingdom (Timothy, Red Clover and Meadow Fescue: growth habit).

62. The experts from the Netherlands and Germany expressed their intention to use the new method for multinomial data, once it had been established.

TGP/14: Glossary of Terms Used in UPOV Documents

(i) Revision of document TGP/14: Section 2: Botanical Terms, Subsection 3: Color, Definition of "Dot"

63. The TWA considered document TWA/42/21.

64. The TWA agreed that it would not be appropriate to provide a definition for “dot” in document TGP/14 Section 2: “Botanical Terms, Subsection 3: Color” and noted that the terms “dot” and “spot” were useful both as a synonym and as separate terms in the different UPOV languages. In this regard, the TWA noted that document TGP/14 should not be expected to resolve translation differences that may occur.

Variety denominations

65. The TWA considered document TWA/42/4.

66. The TWA noted the developments concerning the International Commission for the Nomenclature of Cultivated Plants of the International Union for Biological Sciences (IUBS Commission) and the International Society for Horticultural Science Commission for Nomenclature and Cultivar Registration (ISHS Commission), of relevance for UPOV.

67. The TWA noted the planned contribution from the UPOV Office to the Draft Joint Notice for publication in the *Hanburyana Journal* and the participation of UPOV in the IUBS Commission, to be held on July 19 and 20, 2013 in Beijing.

Uniformity assessment

(a) Assessing Uniformity by Off-types on the Basis of more than one Sample or Sub-samples

68. The TWA considered document TWA/42/22 and noted that:

(a) the TWC had agreed that more detailed information and further analysis were needed in order to give guidance on consequences on the use of the different approaches presented in Annex I to IV of document TWA/42/22, and that France, Germany and the Netherlands would present one or more concrete situations in their countries and the statistical basis of their analysis for its next session;

(b) the TWC had agreed that the statistical basis for the acceptable number of off-types in the subsample of 20 plants used in the context of a sample size of 100 plants (situation D) would be assessed by experts from France and Germany; and

(c) with regard to the approach combining the results from two growing cycles, as set out in Annexes I and II of document TWA/42/22, Situation A and B, the TC had agreed that care would be needed when considering results that were very different in each of the growing cycles, such as when a type of off-type was observed at a high level in one growing cycle and was absent in another growing cycle.

69. The TWA requested the Office of the Union to further develop the Annexes to document TWA/42/22 to be presented at its forty-third session with regard to providing the information requested by the TWC for the analysis of consequences of different approaches. The TWA agreed that the experts from France, Germany, the Netherlands and the United Kingdom, should assist the Office in the preparation of the document.

70. The TWA agreed that the different situations should be presented in one example without mention to individual members of the Union. The TWA also agreed that it should be clarified if the two approaches in situation A were inconsistent, or if one of them was more appropriate, and that situation C should refer to the use of samples or subsamples instead of “tests/trials”.

(b) Testing uniformity of apple varieties arising from mutation

71. The TWA considered document TWA/42/26.

72. The TWA noted the practice for the assessment of uniformity and stability by off-types on the basis of two samples for apple varieties originating as mutations in New Zealand. It noted that the results from the two locations were not combined but treated as two separate samples. The TWA also noted the comment from the expert from New Zealand that “Consistency over two seasons in the same trial location is considered more important than consistency between two trial locations in the same year”.

Experiences with new types and species

73. The TWA received a presentation by an expert from Ukraine on experiences with new types and species in the country, including the new species, *Sorghum oryzoidum*, which is an intergeneric hybrid between *Sorghum bicolor* and *Oryza sativa*. The presentation is included as an annex to document TWA/42/28 “Reports on Developments in Plant Variety Protection from Members and Observers”.

Discussion on draft Test Guidelines

Adlay (Coix ma-yuen *Roman.*)

74. The subgroup discussed document TG/COIX(proj.3), presented by Mr. Yoshiaki Takamatsu (Japan), and agreed the following:

Cover page	to check whether to add English common name “Job's tears”
1.	to delete “and their hybrids”
Char. 1	to have states absent or weak (1), medium (2), strong (3)
Char. 3	to read “Plant: distribution of infructescences” and to have states apical quarter (1), apical half (2), apical three quarters (3), throughout (4)
Char. 7	to be deleted
Char. 8	to delete (+) to read “Culm: number of bracts”
Char. 9	to be deleted
Char. 10	to be indicated as QN to have states absent or weak (1), medium (2), strong (3)
Chars. 11 and 12	to be moved after Char. 2 (observed at growth stage “a”)
Char. 13	to read “Bract: length of sheath”
Char. 14	to delete (+) to read “Bract: anthocyanin coloration of sheath to check correlation between chars. 1, 14 and 16 and whether all three chars. are necessary
Char. 15	to be deleted
Char. 16	to be indicated as QN to read “Stigma: anthocyanin coloration” to add example varieties absent or weak (1), medium (3), strong (5)
Char. 18	to be deleted
Char. 19	to delete (+) to be indicated as VG instead of MS to read “Grain: size” to add example varieties
Char. 20	to read “Grain: ratio length/width” with states “low” to “high” to have states and example varieties as follows: to have state low (1) with example variety “Ohotsuku NO.1” to have state middle (2) with example variety “Akishizuku” to have state high (3) with example variety “Hatojiro” to be indicated as QN
Char. 22	to have “grey” after “dark brown” to replace state “brown” by “light brown”
Char. 23	to check whether two-colored varieties exist
Char. 25	to be indicated as VG instead of MS to add example variety “Akishizuku” for state 2
Char. 26	to be indicated as VG instead of MS to add example variety “Akishizuku” for state 2
Char. 28	to check whether QL or to add intermediate states
8.1 (a) to (c)	to check whether to move to separate section for growth stages (Chapter 8.3)
8.1 (c)	to delete “fully developed”

8.1 (d)	to replace “measured” by “observed”
8.1	to add new note with definition of bract
Ad. 1	to delete photos to read “To be observed when 4 leaves are unfolded.”
Ad. 8	to be deleted
Ad. 11, 12	to check whether to read “To be observed at the middle of the longest culm.”
Ad. 13	to read “The sheath of the largest bract on the longest culm should be observed.” to move literature reference to Chapter 9
Ad. 14	to be deleted
Ad. 16	to delete photos
Ad. 20	to reorder states according to changes to char. 20 (2, 3, 1)
Ad. 22 and 23	to read “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 darkest color is considered to be the main color.”
TQ 1.1.1	to read “1.1” to delete synonym
TQ 1.1.2	to read “1.2” to delete “[ ]” after common name box
TQ 5.2	to read “strong to very strong”

*Adzuki/Red bean (*Vigna angularis *(Willd.) Ohwi & H. Ohashi)*

75. The subgroup discussed document TG/ADZUK(proj.2), presented by Mr. Masayuki Uchida (Japan), and agreed the following:

Alternative names box	to include the synonym *Phaseolus angularis* (Willd.) W. Wight French name to read “Haricot Adzuki” German name to read “Adzukibohne”and to delete “Rote Bohne” Spanish name to read “Judia adzuki” and to delete other Spanish names
3.4	to delete “or more”
4.2.2	to check whether there are any characteristics to be assessed on basis of off-types or to delete the paragraph
T.O.C.	to present characteristics in chronological order according to the indicated growth stages
Char. 1	to add (*) and add to Chapter 5.3 and TQ 5 as grouping characteristic to add growth stage 65
Char. 5	to delete (+)
Char. 6	to have states low (3), medium (5), high (7)
Char. 7	to check whether QL or QN and whether to be combined with Char. 8
Char. 8	to read “Only varieties with lobing present: Terminal leaflet: depth of sinus”
Char. 9	to delete growth stage 65 and to add (+) and explanation explaining when time of flowering is to add example varieties: state 1: Huang Red Bean state 2: Ji Hong No. 4 state 3: Mi Red Bean
Chars. 10, 11	to replace (a) by (b)
Char. 12	to be indicated as PQ to add (b) to replace “light beige” by “yellowish white” to delete (+)
Char. 13	to delete growth stage 88 and to add (+) and explanation explaining when time of maturity is
Char. 15	state 2 to read “medium cylindrical” to check whether state 4 really is a shape or whether it refers to another characteristic (e.g. shape of tip/distal end of seed); if 2nd char. added, char. 15 to read “Seed: length” and to have states short (3), medium (5), long (7)
Char. 16	to be deleted
Char. 17	to read “Seed: main color” (with current states of expression) to add (+) and explanation on main color according to TGP/14

Char. 18	to be moved after char. “Seed: secondary color” to read “Seed: pattern of secondary color” (with states: none; blotched; marbled) to add (+) and explanation on secondary color according to TGP/14
Char. 19	to be moved after char. “Seed: main color” to read “Seed: secondary color” (with states: absent, red, black)
Char. 20	to add (*) to check states and example varieties to add (+) and explanation when and how harvested material is weight
8.1 (a)	to read “Observations on terminal leaflets should be made on terminal leaflets from the middle part of the plant”
8.1 (b)	to delete “All”
Ad. 2	to read “The number of branches should be observed by counting the number of primary branches with more than one node.”
Ad. 5	to be deleted
Ad. 12	to delete photographs
Ad. 15	to be modified according to changes on Char. 15 (see comment on Char. 15)
Ad. 17	to be modified according to changes on Char. 17 (see comment on Char. 17)
Ad.19	to be modified according to changes on Char. 19 (see comment on Char. 19)

Cassava (Manihot esculenta *Crantz*.)

76. The subgroup discussed document TG/CASSAV(proj.4) (rev.), presented by Mr. Fabrício Santana Santos (Brazil) and Mr. Simeon Kibet Kogo (Kenya). The following list presents the comments made by the TWV at its forty-seventh session held in Nagasaki, Japan, from May 20 to 24, 2013. Additional comments considered at the TWA as well as the comments of the TWA on the TWV comments are added and highlighted in grey and in italics.

4.2.2	to delete “of clones”
4.3.2	to read “a new plant stock”
5.3	to add characteristics 16 and 27
Table of Chars.	general remark: to have two sets of example varieties (one for Kenya, one for Brazil) *TWA: to check on the availability of the example varieties named “Clone xxxx”*
Char. 1	to delete (+) and explanation of color in Ad. 1
Chars. 1, 4, 5, 9, 22	to check whether to split in two characteristics in order to separate anthocyanin coloration and intensity of green color (see TGs Ginseng, Yam) *TWA: proposes not the split the characteristics and to maintain them as they are* *TWA: to add example varieties*
Char. 2	to add example variety “IAC 576-70 (BR)” for state 1 and “Taquara Amarela (BR)” for state 9
Char. 3	to read “Leaf: shape of central lobe” *TWA: to add example varieties*
Char. 4	to delete (+) and Ad. 4 *TWA: to delete state 4 “greenish red”*
Char. 5	*TWA: to add example varieties*
Char. 6	to provide example varieties until TWA
Char. 9	to delete (+) and Ad. 9
Char. 10	to delete state 4 *TWA: proposes to maintain state 4* to add example varieties: state 1: Xingu (BR) state 2: IAC 576-70 (BR) state 3: BGMC 1117 (BR)
Char. 11	to delete (*) *TWA: proposes to maintain (*)* to delete example variety “Karibuni” from state 5
Char. 12	to add (*)
Char. 13	to provide example varieties until TWA *TWA: proposes to delete characteristic*

Char. 14	to be deleted *TWA: proposes to delete characteristic*
Char. 15	to check whether to read “Plant: branching” with states all along the stem (1), upper two thirds (2), upper third (3) *TWA: proposes to maintain characteristic as it is*
Char. 16	to add (*) to have “cream” as first state to add example varieties: state “cream”: BGMC 1426 (BR) state “light green”: EAB 182 (BR) state “dark green”: IAPAR 19 (BR) state “purplish”: Mandioca Batata (BR)
Char. 17	to read “Stem: color of bark” to add (+) and combine with Ad. 16 to move “orange” after “brownish yellow”
Char. 18	to read “Stem: color of internal surface of bark” to add (+) and combine with Ad. 16 to add example varieties: state 1: IAC 177-66 (BR) state 2: Taquara Amarela (BR) state 3: IAPAR 19 (BR) state 4: EAB 675 (BR) state 5: Mandioca Batata (BR)
Char. 20	to read “Stem: prominence of leaf scars” to add example varieties state 3: IAC 105-66 (BR) state 5: IAC 576-70 (BR) state 7: BGMC 117 (BR) to add (+) and combine with Ad. 21
Char. 21	to be indicated as VG/MS to check whether the leaf scars in line have the same number of leaf scars, otherwise add a new. char. “pattern of leaf scars” to add example varieties: state 3: Taquara Amarela (BR) state 5: IAC 576-70 (BR) state 7: EAB 321 (BR)
Char. 22	to delete (*) to add (+) and illustration
Char. 23	to check whether to read “peduncle”or “neck” to be indicated as QN to have states absent to short (1), medium (2), long (3)
Char. 24	to read “Root: color of epidermis” to add (+) and combined illustration for characteristics 24, 26 and 27 to check whether to add (*) to add example varieties: state 2: Taquara Amarela (BR) state 3: Mandioca Batata (BR)
Char. 25	to add (*) to add example variety “Mantiqueira (BR)” for state 2
Char. 26	to add (*) to add (+) and combined illustration for characteristics 24, 26 and 27 to ad example varieties: state 1: Branca de Santa Catarina (BR) state 2: IAC 576-70 (BR) state 3: Xingu (BR) state 4: EAB 182 (BR) state 5: Mandioca Batata (BR)
Char. 27	to add (*) to provide example varieties until TWA to add (+) and combined illustration for characteristics 24, 26 and 27
Char. 28	to delete state 4

Char. 29	to add example varieties to provide data over years
Char. 30	to check whether to be deleted or to check number of notes
new. char.	to check whether to add new char. “Root: content of starch in flesh”, if data over years can be provided, also provide methodology
Ad. 1	to be deleted
Ad. 2	to be improved
Ad. 3	to rotate photos by 90 degrees to check states and photos of states 2 and 3
Ad. 4	to be deleted
Ad. 9	to be deleted
Ad. 11	to add indication/arrows where to be observed
Ad. 12	to replace photos by drawings or add arrows
Ad. 21	to be checked, see comment on char. 21
Ad. 23	to invert photos
Ad. 29	to move literature to Chapter 9
9.	to specify the last two references to check and add literature of Ad. 29
TQ 5	to be updated according to Chapter 5.3

Elytrigia (Elytrigia elongata *(Host) Nevski*)

77. The subgroup discussed document TG/ELYTR(proj.3), presented by Mr. Alberto Ballesteros (Argentina), and agreed the following:

4.1.4	to amend the first sentence of each paragraph to specify which type of plant material it applies (In the case of seed-propagated varieties …/ In the case of vegetatively propagated varieties…)
Char. 1	to delete (a) to add example varieties
Char. 2	to add (a) to check whether to be indicated as QL or QN
Char. 3	to add (a) to check whether to be indicated as QL or QN
Char. 5	to check whether to split in two characteristics: “Intensity of green color” with states light (1), medium (2), dark (3) and “Leaf: color” (appropriate states to be checked with RHS Colour Chart” to check whether to add (+) and explanation on time of observation (“during vegetative growth stage”) to add note (c) to add (+) and explanation on time of observation (“during vegetative growth stage”)
Char. 6	to check whether to be indicated as QL or QN to add (+) and explanation on time of observation (“during vegetative growth stage”)
Char. 7	to add (+) and explanation
Char. 8	to check whether to add (+) and explanation to add example varieties
Char. 9	to check whether to be indicated as QL or QN to delete (+)
Char. 10	to check whether to be indicated as QL or QN
Char. 11	to delete (+) to replace “green” by “dark green” to have order of states “yellow, brown-yellow, light green, dark green, brown”
Char. 12	to read “Lemma: pubescence” to check whether to check whether to be indicated as QL or QN

New Chars.	to add following new characteristics: “Time of flowering” “Length of inflorescence” “Length of longest stem” “Ploidy”
8.1 (a)	to read “Observations on the vegetative characteristics should be done before flowering stage, in the first year of the growing cycle.”
8.1 (b)	existing text to read “Observations on flowers (Spike) should be done at fully flowering stage” to add clarification on time of full flowering
8.1	to add new note to cover second year of growing cycle
9.	literature to be added
TQ 4.2	to check whether to insert wording for vegetatively propagated varieties
TQ 6	to provide example characteristic

Groundnut (Arachis hypogaea *L.*) *(Revision)*

78. The subgroup discussed document TG/93/4(proj.3), presented by Ms. Lynette Croukamp (South Africa), and agreed the following:

2.3	to read “1,000 seeds” to delete “1 kg”
4.2.2.1	to read “For the assessment of uniformity in a sample of 60 plants, 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.”
4.2.2.2 and 4.2.2.3	to be deleted
T.o.C.	growth stages to be indicated on top of second column and to remove brackets to remove all “A” and “B” in first column
Char. 2	to be deleted
Char. 4	state (1) to read “absent or weak”, (2) medium, (3) strong
Char. 5	to change notes to (1), (2) and (3)
Char. 6	to read “Basal leaflet: position of broadest part” to be indicated as QN to have states of expression (1) strongly towards apex; (2) moderately towards apex; (3) at middle” to add (*)
Char. 7	to read “Basal leaflet: shape of apex” to have states (1) narrow pointed, (2) broad pointed, (3) rounded, (4) retuse to add (*) to add example variety for state (4)
Char. 8	to be moved before basal leaflet characteristics (before Char. 5)
Char. 9	to add (+) and illustration to be moved after stem characteristic
Char. 10	to add (+) and illustration to read “Primary branch: flowering pattern”
Char. 11	to have states (1) absent or very weak, (2) weak, (3) medium, (4) strong, (5) very strong to add (*)
Char. 12	to read “Pod: reticulation of surface” and to have states weak, medium, strong to add (+) and explanation and illustration to add (*)
Char. 13	states to read (1) two; (2) three or more to add (+) and explanation that varieties with two kernels may occasionally present one or three kernels
Char. 14	to check whether to read “Kernel: main color of testa” to add (+) and explanation on main color and secondary color to add explanation on observation of the characteristic (mature uncured testa) to add example varieties to delete code “99”

Char. 15	to add explanation on time of observation of the characteristic (mature uncured testa)– two weeks after harvesting to check whether to add “B” to delete code “99”
Char. 16	to be deleted
Char. 17	to add explanation on observation of the characteristic (mature uncured testa); to add explanation on moisture content at 7% on 100 seeds to read “Kernel: weight” to be indicated as MG to add (*)
Char. 18	to add explanation on observation of the characteristic (mature uncured testa) – two weeks after harvesting To add example varieties for states (1) and (3)
Char. 19	to be indicated as MG to delete indication to “85” to add explanation “time of maturity is when 50% of plants have reached growth stage 85”
8.1 (a)	to read “Observations on the basal leaflet should be made on a fully developed basal leaflet”
8.2	to become 8.3
Ad. 3	to add explanation
Ad. 4	to be deleted
Ad. 11	to delete sentence on top
9.	to read “*Arachis hypogea*” in italics to add literature
TQ 5.7	to be moved from 5.7 to TQ. 7 to add state (4) “Runner”

Kentucky Bluegrass (Poa pratensis *L.*) *(Revision)*

79. The subgroup discussed document TG/33/7(proj.2), presented by Mrs. Beate Rücker (Germany), and agreed the following:

Alternative name box	to add “Poa de los prados” in Spanish
3.4.1	first sentence to read “Each test should be designed to result in a total of at least 30 spaced plants, for apomictic varieties, and at least 60 plants, for non-apomictic varieties,…”
Char. 1	to place note “C” between growth stage and method of observation in second column to delete state 9
Chars. 2, 3	to be deleted
Char. 4	to delete states 1 and 9
Char. 5	to delete (+) to delete states 1 and 9
Chars. 6 to 9	to underline only “without”/”after”
Chars. 7, 9	to delete state 1
Char. 11	to delete states 1 and 9
Char. 13	to delete state 1
Char. 14	to read “Inflorescence: shape of rachis”
Char. 15	to read “Inflorescence: form of collar of rachis”
Char. 16	to delete states 1 and 9
Char. 17	to delete state 1
Char. 18	to delete state 9
Ad. 13	to read “Measurements should be made in the field from ground level to the top of the plant, when the inflorescences are fully expanded.”
Ad. 14	to add “The shape of rachis should be observed opposite to the lower side branches”
Ad. 15	to add “The form of collar of rachis should be observed opposite to the lower side branches.”

8.2	to check tabulation of “Seedling growth”
TQ 5.4	state 8 to read “tall to very tall”
TQ 9.3	to be deleted

Rhodesgrass (Chloris gayana *Kunth*)

80. The subgroup discussed document TG/RHODES(proj.2), presented by Mr. Tanvir Hossain (Australia), and agreed the following:

4.2.2.	to read “…a population standard of 2% and an acceptance probability of 95% should be applied. In the case of a sample size of 60 plants, 3 off-types are allowed.”
5.3	to delete Char. 4 and replace it by Char. 2 “Plant: growth habit” to add char. 23 “Inflorescence: attitude of spikes”
Char. 1	to be indicated as MG
Char. 2	to have order of states from erect (1) to prostrate (9)
Char. 3	to read “Plant: development of stolons”
Chars. 4, 5	to delete (+) and (*)
Chars. 6	to delete (+)
Char. 7	to be deleted
Chars. 8, 9	to delete (+)
Chars. 11, 12	to add (*)
Char. 13	to be indicated as VG and QN to add color states and example varieties to read “Leaf: intensity of green color” and to have states light (1), medium (2), dark (3)
Chars. 14 and 15	to move peduncle chars. 14 and 15 after flag leaf characteristics (21)
Char. 14	to add (*)
Char. 22	to delete (*)
Char. 23	state 2 to read “semi-erect to pendulous” to add (*)
Char. 27	to add (+) and explanation on how many plants to consider beginning of time of flowering
8.1 (b)	to delete indication of characteristics in this section and add (b) to each of these characteristic in the table of characteristics
Ad. 12	to improve explanation on calculation of culm width to add illustration with arrows to indicate internodes
Ad. 23	to replace photographs with illustrations for the three states
Ad. 25	to improve explanation (longest spike to be measured)
9.	to correct reference “Lamp, C.A., et al.”: correct spelling of “I nkata…” to “Inkata”

Scorpion Weed (Phacelia tanacetifolia *Benth.*)

81. The subgroup discussed document TG/PHACE(proj.3), presented by Mrs. Bogna Kowalczyk (Poland), and agreed the following:

5.3	to add Char. 5
T.O.C.	to check whether to have more (*) characteristics
Char. 1	to add (*) to delete “G”
Char. 4	to delete “61” to add (+) and explanation
Char. 6	to be deleted
Char. 8	to have notes 1, 2, 3

Char. 9	to have notes 1, 2, 3 to add example varieties: state 1: Natra state 2: Boratus, Beehappy state 3: Anabela
New Char.	to check whether to insert new char. “Leaf: structure of leaflets” with states fine (1) medium (2), coarse (3)
Char. 10	state 3 to read “strong”
Char. 11	to read “Flower: color” last state to have note 3 to be indicated as PQ to delete “G”
Char. 13	to add better explanation to clarify the different states of expression to add example varieties to have notes 1, 2, 3
Char. 15	to read “Seed: 1,000 seed weight”
New Char.	to check whether to insert new char. “Inflorescence: number of flowers on uppermost tendril” if information on observation and illustration for states of expression can be provided (if possible in several years on same varieties)
Ad. 6	to be deleted
Ad. 8, 9	first sentence to read “A leaf from the middle part of the main stem should be observed.” to delete “of leaf” in text box to add indication of width
Ad. 12 and 13	to correct title to clarify the indicated structure with arrows
Ad. 14	to read “… to the top of the uppermost tendril”
8.2	title to read “Growth stages” to delete growth stage “3: Stages continuous until” to add “34: Stem 40% of final length”and “35: Stem 50% of final length”
TQ 5.1	to have notes (2) and (4) to re-introduce Char. 5
TQ 6	to add example: “Leaf: length” with states “short” and “medium”

Sorghum (Sorghum bicolor) *(Revision)*

82. The subgroup discussed document TG/122/4(proj.2), presented by Mr. Luis Salaices (Spain), and agreed the following:

Name box	to have same species and hybrid listed as in Section 1 (Subject of these Test Guidelines)
Alternative names	to delete replace “*Sorghum sudanense* and hybrid S. *bicolor* x *S. sudanense*” by “*S.* x*drummondii”*
1.	to read “These Test Guidelines apply to all varieties of *Sorghum bicolor* and *Sorghum* x*drummondii* (Steud.) Millsp. & Chase”
2.3	to read “The minimum quantity of plant material, to be supplied by the applicant, should be: 0.2 kg for inbred lines 1 kg for hybrids and open-pollinated varieties.”
4.1.1	to use same wording as in ASW 7(A) on parent formula
4.3.2	to use standard wording
5.3	to be updated according to changes of Chars. 18 and 29
Char. 1	to change growth stage to 12-14
Char. 2	to add (+) and explanation
Char. 3	growth stage to be indicated as 45-59 to read “Leaf: intensity of green color” to have notes 1 to 5

Char. 4	growth stage to be indicated as 45-59 to insert new state (2) light green and to renumber the following states accordingly
Char. 5	growth stage to be indicated as 45-59
Char. 6	growth stage to be indicated as 51
Char. 7	growth stage to be indicated as 69 to combine states 3 and 4 to have one state “yellow green”
Char. 8	to be moved before Char. 7
Char. 10	state 1 to read “white” instead of “whitish” to add (+) and explanation about impossibility to observe in case of strong anthocyanin coloration
Char. 13	to check whether QN to add guidance that to be observed on 10 plants to check if “Flower: male sterility”
Char. 14	growth stage to be indicated as 69
Char. 15	to read “Lemma : length of arista” to have states “absent or very short” to “very long”
Char. 16	to read “Dry anther: color” to check whether to add more example varieties
Char. 17	to delete “(forage varieties only)” growth stage to be indicated as 41-49
Char. 18	to read “Plant: length” to check states of expression with other interested experts
Chars. 20, 21	to delete (+)
Char. 22	to read “Panicle: length” to add (+) and explanation on how to assess the characteristic (“without neck”)
Char. 23	to check whether to read “Panicle: length of neck” to have states 1, 2, 3
Char. 24	to read “Panicle: length of primary lateral branches”
Char. 26	to read “Panicle: position of broadest part” and to update states accordingly
Char. 29	to replace “straw yellow” by “light yellow” to read “Grain: color after threshing” to add states “purple” and “black”
Char. 30	to delete (*)
Char. 31	to add state “ovate" to check whether to have notes (1) to (4)
Char. 33	to add intermediate state to check data from different years for consistency of expression of characteristic
Char. 34	to read “Grain: type of endosperm”
Char. 35	to read “Grain: color of vitreous albumen endosperm” to combine states 2 and 3 to one state “yellow”
Char. 36	to clarify how to observe the characteristic to have notes 1 and 9 to be indicated as QL
8.1	(a) and (d) to become explanations for individual characteristics in 8.2 to delete indication of Char. 2 corresponding arrow from illustration
8.1 (a)	to read “The observation should be made on the third leaf from the lower bottom.“
8.2	illustrations of color in Ad. 4, 5 and 10 to be deleted for final version of draft
Ad. 6	to read “The time of panicle emergence is when the tip of the panicle has emerged from flag leaf sheath on 50% of the plants.”
Ad. 13	to have same states as Char. 13
Ad. 15	to add colon “Lemma: length of arista”
Ad. 33	to read “In this ~~Standard~~ Test Guidelines…” to remove literature from this section and add to section 9 to check in “Notes” item 3, to clarify ““Buddy” soft drink”
8.3	to check whether Code 19 to read “9 or more leaves unfolded”
TQ 1	to have one set of boxes (1.1 and 1.2) for each species and hybrid
TQ 5.4	to check wording to include “to” for all intermediate states (short to medium)

Urochloa (Brachiaria)

83. The subgroup discussed document TG/UROCH(proj.7), presented by Mr. Fabrício Santana Santos (Brazil), and agreed the following:

Name box	to delete “and their hybrids” to add “and hybrids between U. decumbens x U. brizantha x U. ruziziensis; and U. brizantha x U. ruziziensis”
Alternative names box Urochloa brizantha	to add botanical name “Panicum brizanthum Hochst. ex A. Rich.” to delete repeated mention to “Palisade grass” in English to check “Pasto alambre” in Spanish (used for U. decumbens, according to GENIE and GRIN)
Alternative names box Urochloa dictyoneura	botanical names to read “Urochloa dictyoneura (Fig. & De Not.) Veldkamp; Brachiaria dictyoneura (Fig. & De Not.) Stapf; Panicum dictyoneurum Fig. & De Not.”
Alternative names box Urochloa humidicola	to add botanical name “Panicum humidicola Rendle”
1.	to delete “and their hybrids” to add “and hybrids between U. decumbens x U. brizantha x U. ruziziensis; and U. brizantha x U. ruziziensis” to delete all information on the two groups: “For examination purposes the five species are divided into the following two groups: Group 1: Urochloa brizantha (Hochst. ex A. Rich.) Stapf., Urochloa decumbens Stapf., and Urochloa ruziziensis R. Germ. & Evrard and their hybrids. Group 2: Urochloa dictyoneura (Fig. & De Not.) Veldkamp P. and Urochloa humidicola (Rendle) Morrone & Zuloaga and their hybrids.”
3.4.1	to read “3.4.1 Each test should be designed to result in a total of at least 40 spaced plants which should be divided into two replicates for apomictic varieties and least 60 spaced plants which should be divided into three replicates for cross-pollinated varieties.”
4.1.4	to read “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 for apomictic varieties, and on 60 plants or parts taken from each of 60 plants for cross-pollinated varieties, and any other observations made on all plants in the test, disregarding any off-type plants.”
4.2.2	to keep the heading “Cross-pollinated varieties” and to become 4.2.3 to read “The assessment of uniformity for cross-pollinated varieties should be according to the recommendations for cross-pollinated varieties in the General Introduction.”
4.2.3	to become 4.2.2 “Apomictic varieties” to read “For the assessment of uniformity of apomictic varieties, 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.”
4.2.4	to be deleted
Char. 1	to add example varieties to have states “erect, semi erect, semi prostrate, prostrate”
Char. 2	to add (*)
Char. 3	to be deleted
Char. 4	to be deleted
Char. 5	to delete (a) to add explanation on how to observe the characteristic
Char. 6	to delete “Group 1 only” to add (*)
Char. 7	to delete “Group 1 only” to have notes 1 to 3
Char. 8, 10, 11	all leaf characteristics to be changed to “Flag leaf”
Char. 9	to add (*)

Char. 10	to add (*)
Char. 11	states to read “narrow lanceolate; medium lanceolate; broad lanceolate” to provide illustration to add (*) to be added as grouping characteristic in 5.3
Char. 12	to add (*) to delete “Mulato”
Char. 13	to add (*) to delete “Mulato”
Char. 14	to add (*)
Char. 15	to check whether to read “on both sides”
Chars. 15 to 23	to indicate the time of assessment (to add (a))
Char. 15	states to replace “side” by “surface” to delete “Mulato” to add (*)
Char. 16	to add explanation with arrows to add (*)
Char. 17	to add explanation to read “Inflorescence: length of rachis”
Char. 18	to add explanation to have notes (1), (2) and (3)
Char. 19	to add (*) (listed as grouping char. in 5.3) to add explanation
Char. 20	to delete (+) to delete state (5) black
Char. 21	to delete “Group 1 only” to add (*)
Char. 22	to delete “(at flowering)”
Char. 23	to be deleted. If appropriate could be reintroduced in future
8.1 (a)	to read “Observations should be made at full flowering stage”
8.1 (b)	to clarify which culm to be assessed
8.1 last paragraph	to check whether to become addendums for individual characteristics
Ad. 2	to replace illustrations with diagram from Rhodesgrass (Ad. 2)
Ad. 6	to clarify where to assess the characteristic
Ad. 8	to clarify difference between state (2) and (3)
9	to delete reference to “ISTA”
TQ 1	to add one set of boxes for each species and hybrids
TQ 4.2.1	to have boxes “apomictic”, “non-apomictic” and “other” and to delete other options
TQ 5	to add same chars. as in section 5.3
TQ 6	to replace “black” by “light purple”

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

84. The subgroup discussed document TG/3/12(proj.2), presented by Mrs. Virginie Bertoux (France), and agreed the following:

Alternative names box	to add names in French, German and Spanish
3.3.2	to delete paragraph heading
3.4.1	to add “which should be divided between at least 2 replicates”
3.4.4	to be reviewed in order to include parent lines (see TGP/10)
4.2.3	to check whether to indicate sample size of 1500 plants instead of 2000 plants subject to provision of statistical data
4.2.4	third paragraph to read “For “A” characteristics, with the exception of characteristic 2 and 3,…”
4.3.3	to delete paragraph heading
T.o.C.	to delete translations

Char. 1	to check whether three states are appropriate and whether PQ or QL to read “Seed: color” to add example variety “Amethyst” for state 3
Char. 6	to compare results of observation at growth stage 49 to 51 and 57 or 60 to indicate method of observation to be indicated as B instead of A to add example varieties to check number of states
Char. 9	to add (+) and to move “(lower side)” to Ad. 9
Char. 10	to check whether char. is necessary: if so: to read “Culm: density of hairiness of uppermost node” to check number of notes (if 9 notes are appropriate to have states absent or very sparse (1) to very dense (9)) to check level of discrimination to add (+) and explanation and example varieties
Char. 14	to be indicated as QN state 1 to read “thin”
Char. 15	states to have following order: tapering, parallel sided, slightly clavate, strongly clavate, fusiform example variety for state 4 to be checked to check whether example variety for state 4 “Aura” is a spring or winter variety
Char. 16	to check whether to replace “lax” by “sparse”
Char. 18	to read “Ear: scurs or awns”
Char. 19	to read “Ear: length of scurs or awns”
Char. 20	to check whether to add third state and to have states white (1), slightly colored (2), strongly colored (3)
Char. 21	to read “Apical rachis segment: area of hairiness on convex surface” to check whether example variety for state 9 is a spring or winter variety
Char. 23	to read “strongly elevated”
Char. 26	to read “Lower glume: area of hairiness of internal surface” state 1 to read “very small” state 5 to read “very large”
Char. 27	to add (+) and first photograph proposed in document TWA/42/29 as illustration
New Char.	to add new char. “Lower glume: surface texture” to have states smooth (1), intermediate (2), rough (3) to indicated growth stage 80-92 to be indicated as VG and QN
New Char.	to check whether to include new char. “Grain shape” subject to data and examples to be provided to be indicated as PQ possible states to be checked
Ad. 1	to provide information on concentration of solution and duration of test
Ad. 2	scale of recording to read “See characteristic 2…” to replace “grain” by “seed” in the explanation (see change to char. 1) Number of grains per test to read “100 grains for uniformity. The grains should not have been treated chemically” to delete photographs
Ad. 3	to delete photographs “Light:” to read “After the coleoptiles have reached a length of about 1 cm in the dark, they are placed in artificial light (daylight equivalent) at 13000 to 15000 lux continuously for 3 – 4 days”
Ad. 4	to use drawings as proposed in document TWA/42/29 instead of photographs
Ad. 5	to repeat names of states in description of states to check whether pictures have been taken at the same stage (47-51)
Ad. 14	heading and states to read as in Char. 14 to move expression in brackets in title of Ad. 14 to text in Ad. 14 to keep drawings, not to use photographs proposed in document TWA/42/29
Ad. 15	to delete photographs and keep drawings only
Ad. 16	to replace photographs with new proposal from document TWA/42/29
Ad. 18	to add that observations should be made at the tip to add definition of scurs and awns

Ad. 19	to add that observations should be made at the tip to include explanations on states as proposed in document TWA/42/29
Ad. 21	state (9) to read “very large” to improve illustrations on the basis of document TG/3/11
TQ 6	to have names of states instead of notes
General remarks	- electrophoresis characteristics from document TG/3/11 to be kept as an annex to the Test Guidelines - regional sets of example varieties to be developed as an annex to the Test Guidelines

Partial revision for the Test Guidelines for Pea

85. The TWA considered document TWA/42/25 Add.

86. The TWA agreed with the draft partial revision of the Test Guidelines for Pea proposed by the TWV, with the deletion of “maintainer UK1252” and “maintainer DK52”, such that only the names of the example varieties “Stratford” and “Vivaldi” were presented.

87. On that basis, the TWA agreed to submit the partial revision of the Test Guidelines for Pea to the TC for adoption at its fiftieth session to be held in Geneva in April 2014.

Recommendations on draft Test Guidelines

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

88. The TWA agreed that the following draft Test Guidelines should be submitted to the TC for adoption at its fiftieth session, to be held in Geneva in April 2014, on the basis of the following documents and the comments in this report:

Subject	Basic Documents (2013)
*Groundnut (*Arachis* L.) (Revision)	TG/93/4(proj.3)
Kentucky Bluegrass (*Poa pratensis* L.) (Revision)	TG/33/7(proj.2)
*Rhodesgrass (*Chloris gayana* Kunth)	TG/RHODES(proj.2)

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

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

Subject
Adlay (*Coix ma-yuen* Roman.)
*Adzuki/Red Bean (*Vigna angularis*)
*Cassava (*Manihot esculenta* Crantz.)
Castor Bean (*Ricinus comunis* L.)
Elytrigia (*Elytrigia elongata* (Host) Nevski), (*Agropyron elongatum* (Host) P. Beauv.)
Finger millet (*Eleusine coracana* (L.) Gaertn.)
Ginseng (*Panax ginseng* C.A. Mey.) (Revision)
Quinoa (*Chenopodium quinoa* Willd.)
*Scorpion Weed (*Phacelia tanacetifolia* Benth.)
*Sorghum (*Sorghum bicolor* and *S.* x*drummondii*) (Revision)
*Urochloa (Brachiaria)
Wheat (*Triticum aestivum L. emend. Fiori et Paol.*) (Revision)
Yellow Potato (*Solanum tuberosum* L. subsp. *andigenum*)

90. The Leading Experts, interested experts and timetables for the development of the Test Guidelines are set out in Annex V to this report.

91. The TWA agreed to request the Leading Expert of the draft Test Guidelines for Yellow Potato to provide relevant information in a document for circulation to the interested experts by August 8, 2014, with regard to the commissioning of Test Guidelines, as set out in document TGP/7/3, Section 2.2.2.2.

92. The TWA expressed its interest to revise the Test Guidelines for Oats (document TG/20/10) and Red Clover (document TG/5/7) in the near future.

Guidance for drafters of Test Guidelines

93. The TWA considered document TWA/42/24.

94. The TWA noted the information provided in the TG Drafters' webpage of the UPOV website, including the Revised Practical Guide for Drafters (Leading Experts) of UPOV Test Guidelines.

95. The TWA noted:

(a) the plan for the development of a prototype web-based TG Template for testing by interested experts by the end of 2013;

(b) that the template would provide sufficient flexibility for drafters of Test Guidelines to introduce proposals that were not covered by existing standard wording and would retain flexibility in the structure for further development of Test Guidelines by UPOV members.

96. The TWA agreed with the TWV to request the Office of the Union to investigate the possibility of using a different way of sharing draft Test Guidelines between interested experts (e.g. SharePoint or restricted area on the TG Drafters' webpage of the UPOV website), as the size of the documents could be an issue when using regular email addresses.

97. The TWA agreed with the proposal of the TWO at its forty-sixth session and the TWF at its forty-fourth session, to receive a demonstration during the Preparatory Workshop on how to use the TG Template available on UPOV website, and to include a template for a grid for shape and ratio in the future web-based TG Template that leading experts might use when drafting Test Guidelines.

98. The TWA noted the file "Summary information on quantity of plant material required on adopted Test Guidelines" available on the TG Drafters' webpage of the UPOV website.

Information and databases

(a) UPOV information databases

99. The TWA considered document TWA/42/5.

100. The TWA agreed to check the amendments to UPOV codes and the new UPOV codes or new information added for existing UPOV codes by July 31, 2013.

101. The TWA noted the developments concerning the program for improvements to the Plant Variety Database since the forty-first session of the TWA.

102. The TWA noted that an introduction to the PLUTO database would be included in the Preparatory Workshop of future TWP sessions.

103. The TWA noted the plans of the Office of the Union to conduct a survey of members of the Union on their use of databases for plant variety protection purposes and on their use of electronic application systems.

104. The TWA proposed to include the disclaimer as provided in document TWA/42/5, Annex III, paragraph 3.4.2 in the reports generated by the PLUTO database:

"The absence of information in [item XXX] does not indicate that a variety has not been commercialized. With regard to any information provided, attention is drawn to the source and status of the information as set out in the fields 'Source of information' and 'Status of information'. However, it should also be noted that the information provided might not be complete and accurate."

(b) Variety description databases

105. The TWA considered documents TWA/42/6 and TWA/42/25.

106. The TWA noted the report on the Pea Database study as presented in document TWA/42/25.

107. The TWA noted the approach for managing variety collections of Pea as presented in the Annex to document TWA/42/25.

108. The TWA welcomed the results of the study on the Pea Database and noted that it presented a good method for improvement of Test Guidelines.

(c) Exchangeable software

109. The TWA considered document TWA/42/7.

110. The TWA noted that the TC had concluded that the title of document UPOV/INF/16 "Exchangeable Software" and Section 1 "Requirements for exchangeable software" should remain unchanged, but that it would be useful to develop a separate information document that would allow members of the Union to provide information on the use of non-customized software and equipment that was used by members of the Union.

111. The TWA noted that the TC had:

(a) agreed with the inclusion of "Information System (IS) used for Test and Protection of Plant Varieties in the Russian Federation" and the AIM software from France in document UPOV/INF/16;

(b) requested the Office of the Union to investigate the possibility of the translation of "Information System (IS) used for Test and Protection of Plant Varieties in the Russian Federation" into English on the basis that the Russian Federation would verify the translation provided by the Office of the Union; and

(c) requested the Office of the Union to translate the AIM software to English on the basis that France would verify the translation provided by the Office of the Union.

112. The TWA noted that the TC had agreed with inclusion of the information contained in the Annex II to document TWA/42/7 for a revision of document UPOV/INF/16 by the Council at its forty-seventh session, to be held in Geneva on October 24, 2013.

113. The TWA noted that the TWC would be invited to consider the software proposed by Mexico for inclusion in document UPOV/INF/6 "Exchangeable software", as presented in Annex III to document TWA/42/7, at its thirty-first session, held in Seoul, from June 4 to 7, 2013.

(d) Electronic application systems

114. The TWA considered document TWA/42/8.

115. The TWA noted the developments concerning a prototype electronic form.

Date and Place of the Next Session

116. At the invitation of Argentina, the TWA agreed to hold its forty-third session in Mar del Plata, Argentina, from November 17 to 21, 2014, with the preparatory workshop on November 16, 2014.

Chairperson

117. The TWA agreed to propose to the TC that it recommend to the Council to elect Mr. Tanvir Hossain (Australia), as the next Chairperson of the TWA.

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

118. The TWA noted that no matters were raised under this item.

Future program

119. 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
   (a) Reports from members and observers
   (b) Reports on developments within UPOV (oral report by the Office of the Union)
4. Molecular Techniques (document to be prepared by the Office of the Union)
5. TGP documents
6. Variety denominations (document to be prepared by the Office of the Union)
7. 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)
8. Uniformity assessment
9. Matters to be resolved concerning Test Guidelines adopted by the Technical Committee (if appropriate)
10. Discussion on draft Test Guidelines (Subgroups)
11. Recommendations on draft Test Guidelines
12. Guidance for drafters of Test Guidelines
13. Date and place of the next session
14. Future program
15. Report on the session (if time permits)
16. Closing of the session

Visit

120. On the evening of June 17, 2013, the TWA visited the Grishko National Botanical Garden where it received an oral presentation on the collections of agricultural and numerous other crops, including roses and fruit trees by Mr. Dzhamal B. Rakhmetov, Doctor of Agricultural Sciences and Head of the Department of Alternative Crops of the Grishko National Botanical Garden and Ms. Olena Rubtsova, Doctor of Biological Sciences and leading Researcher at the Grishko Botanical Gardens.

121. On the afternoon of June 20, 2013, the TWA visited Mankivka State Variety Examination Station in Dzenzelivka village, Mankivka region, Cherkasy oblast, where it was welcomed by Mr. Oled Levchenko, Director, Mankivka State Variety Examination Station. The main task of the Mankivka State Variety Examination Station is to conduct field examination of varieties for value for cultivation and use (VCU) and DUS testing and post-control as well as disease resistance assessment of several agricultural crops, such as soft wheat, barley, durum wheat, oat and soy bean. Guided by the staff of the Mankivka State Variety Examination Station, the TWA visited DUS testing trials, post-control and VCU trials for wheat, barley and other species.

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

[Annexes follow]

ANNEX I

LIST OF PARTICIPANTS

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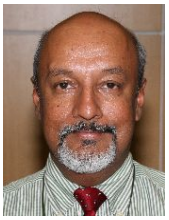

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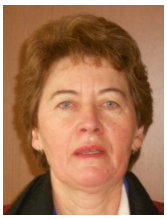

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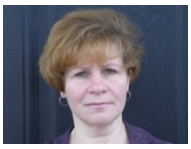

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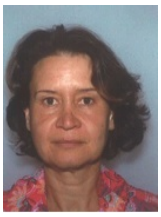

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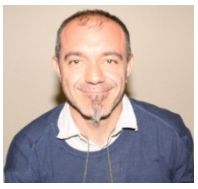

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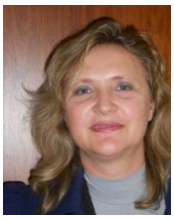

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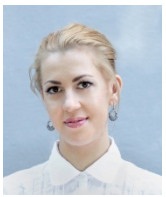

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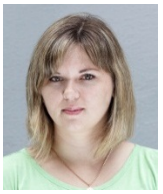

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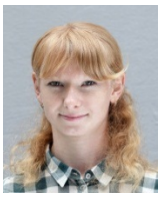

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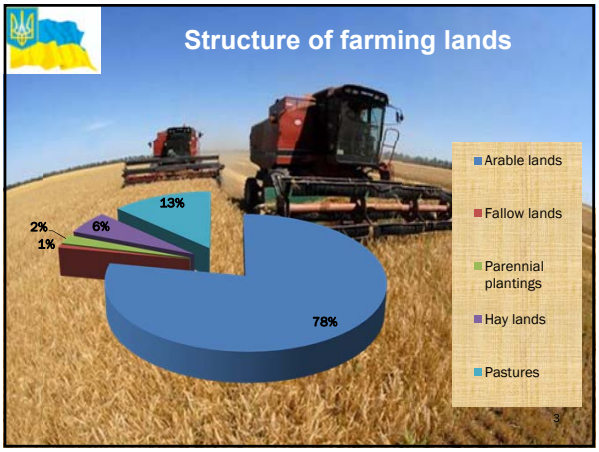
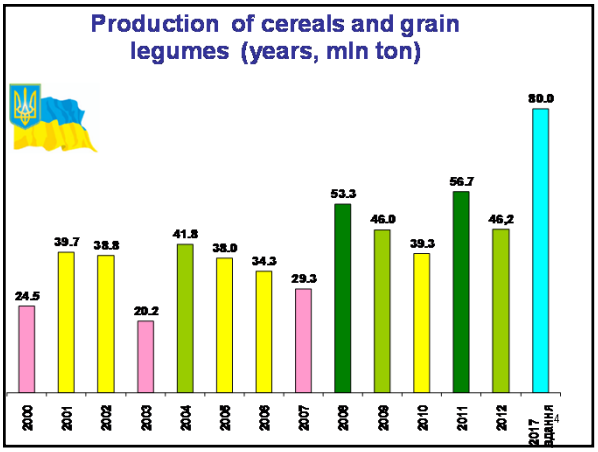
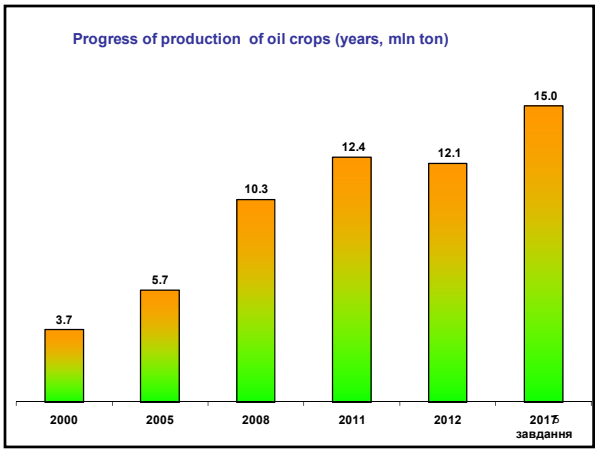
[Annex II follows]

ANNEX II

STATE AND PROSPECTS OF CROP PRODUCTION IN UKRAINE

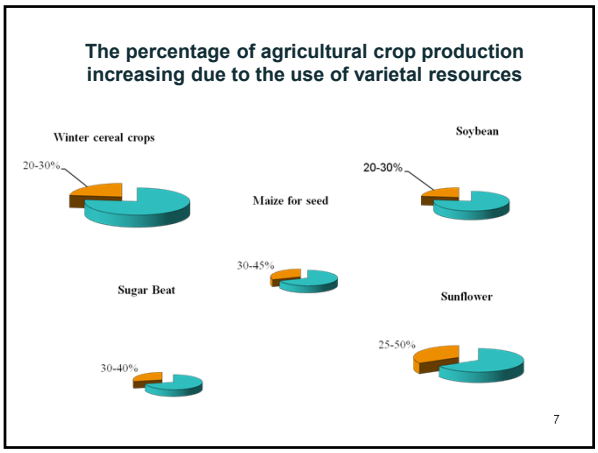


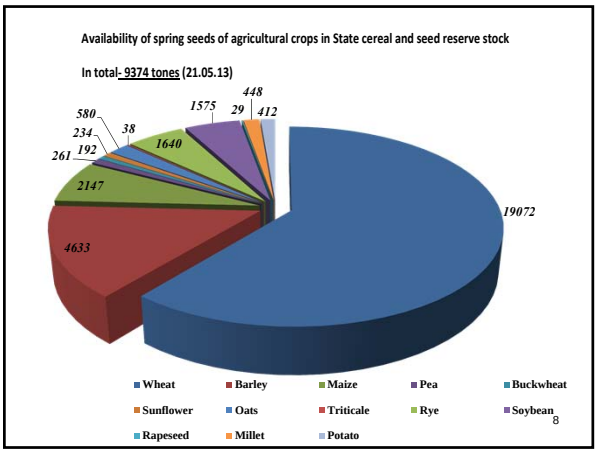


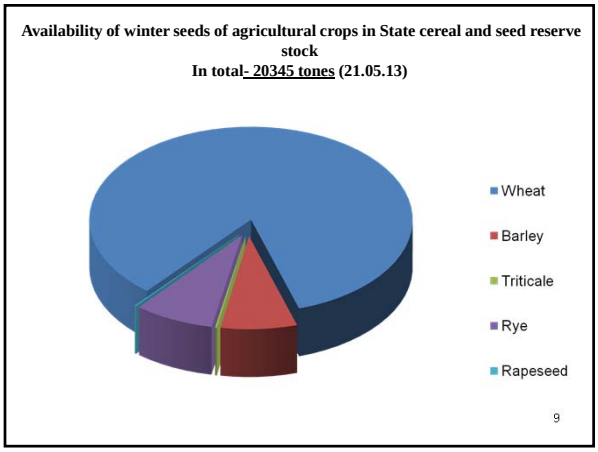


Ukrainian National List, 2012 (extract)

Botanical taxa	Total varieties	including		Ukrainian breeding, %
		Ukrainian	Foreign	
Total	7058	3662	3396	52
Winter Wheat	260	208	52	80
Spring barley	120	81	39	68
Maize	1462	550	912	38
Sugar Beet	176	43	133	24
Sunflower	739	209	530	28
Potato	145	63	82	43
Vegetable - Total	1884	738	1146	39
Flowering-Ornamental-Total	243	221	22	91
Forestry- Total	8	8	0	100
Fruits- Total	397	370	27	93
Berries- Total	131	108	23	82
Grapevine	107	104	9	97







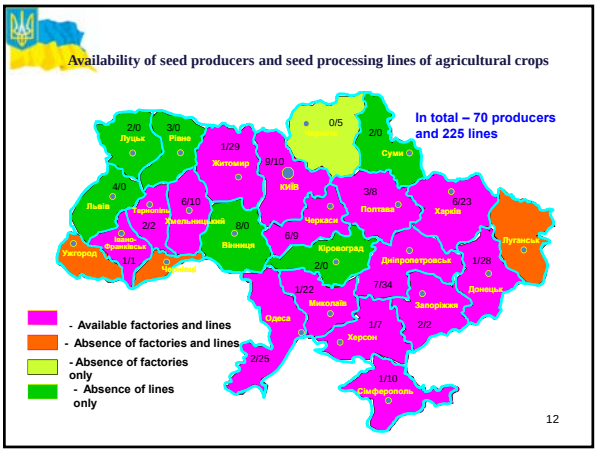
Information on import of seed of agricultural crop for harvest 2013
(latest info by State Agricultural Inspection as of 16.05.2013) (metric ton)

Crops	Imported 01.09.2011 - 16.05.2012	Imported 01.09.2012 - 16.05.2013	per week
Maize	34947,9	71645,0	3794,6
Sunflower	14488,6	23559,1	585,8
Sugar beet	1718,7	825,2	-
Spring rapeseed	281,2	363,2	-
Spring barley	325,3	308,3	-
Spring wheat	170,3	396,4	-
Pea	105,0	150,5	-
Soybean	295,7	489,8	41,4
Potato	1189,8	220,0	60,0
Sorghum	740,1	463,7	169,9
Rice	11,0	14,2	-
Vegetables	307,7	294,4	39,4

Information on
seed of agricultural crops export
(latest info by State Agricultural Inspection as of 16.05.2013)

(metric ton)

Crop	Exported 01.09.2011 16.05.2012	Exported 01.09.2012 16.05.2013	per week
Winter wheat	77,9	129,7	-
Maize	5096,8	7359,7	318,7
Sunflower	593,4	126,5	-
Soybean	18,9	5,0	-
Spring barley	39,0	60,0	60,0
Sugar beet	-	13,4	-
Hemp	-	21,7	20,0



[Annex III follows]

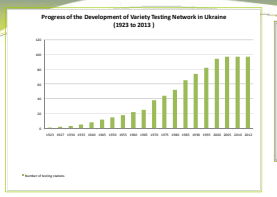
ANNEX III

RIGHT PROTECTION FOR PLANT VARIETY IN UKRAINE

The Ministry of Agrarian Policy and Food of Ukraine
State Veterinary and Phytosanitary Service of Ukraine
Ukrainian Institute for Plant Variety Examination

RIGHT PROTECTION FOR PLANT VARIETY IN UKRAINE

Kyiv, 2013



Plant varietal resources are of particular value for economic and social development of Ukraine, first of all, for sustaining and increasing the amounts of plant products output. The State Register of Plant Varieties Suitable for Dissemination in Ukraine currently comprises over 7 thousand varieties representing 520 botanical taxa of agricultural, vegetable, fruit-and-berry, forest, herbal crops, flower and ornamental crops, mushrooms and other groups of plant botanic taxa.

History of State System for Plant Variety Protection

1923 - All-Ukrainian Seed Association, with Ukrainian Variety Testing Network established as its part (Ukrainian Varietal Network)
1953 - State Commission for Varietal Testing of Agricultural Crops at the USSR Ministry of Agriculture
1953 - State Commission for Varietal Testing of Agricultural Crops Inspectorate for Ukraine's SSR
1989 - State Commission for Testing and the Protection of Plant Varieties
1995 - Member to the International Union for the Protection of New Varieties of Plant
1998 - Partnership and Cooperation Agreement between Ukraine and the European Union
2002 - Resolution on Establishment of the State Service on Right Protection for Plant Varieties and the Ukrainian Institute for Plant Variety Examination
2011 - President of Ukraine Decree No. 464/2011 on Adoption of the Regulation (designated authority in the field of rights protection for plant varieties).

Ukrainian Institute for Plant Variety Examination – examination body



Ministry of Agrarian Policy and Food of Ukraine
(food safety of the state)

State Veterinary and Phytosanitary Service of Ukraine
(designated authority in plant variety protection)

Ukrainian Institute for Plant Variety Protection
(Examination body for plant variety protection)

Examination facilities of State system on plant variety rights protection
(Qualifying examination of plant varieties DUS-test; VCU-test)

Ministry of Agrarian Policy and Food of Ukraine
STATE REGISTER OF SEEDS AND SEEDLING PRODUCERS

Ministry of Agrarian Policy and Food of Ukraine
State Veterinary and Phytosanitary Service of Ukraine
STATE REGISTER OF PLANT VARIETIES SUITABLE FOR DISSEMINATION IN UKRAINE

Ministry of Agrarian Policy and Food of Ukraine
State Veterinary and Phytosanitary Service of Ukraine
STATE REGISTER OF PLANT VARIETIES PATENT HOLDERS

Layout of State system for plant variety rights protection interaction with agricultural crops seed and seedling sys

Ministry of Agrarian Policy and Food of Ukraine

State Veterinary and Phytosanitary Service of Ukraine
Ukrainian Institute for Plant Variety Examination

Seed and seedling system

NAN (Ukrainian academy of agrarian sciences) NAAN (Ukrainian academy of agrarian sciences)
NULES (National University of Life and Environmental Sciences of Ukraine)
Ukrainian Seed Partnership (coordination of activity and self - management in the field of seed and seedling)
Examination and Certification Centre State Enterprise (conducting examination of seed and planting material)
Security seed stock

Plant Variety Resources Development and Seed and Planting Material Production

Plant variety applicants, breeders, commodity producers, seed production entities

Agreements

Ukraine's international cooperation in seed certification sphere

Ukraine acceded OECD Varietal Certification Schemes: cereals; maize; sorghum.

– Organization for Economical Cooperation and Development

Scientific Potential:

COORDINATION OF RESEARCH ACTIVITIES

Research and Scientific Council
under the Ministry of Agrarian Policy and Food of Ukraine

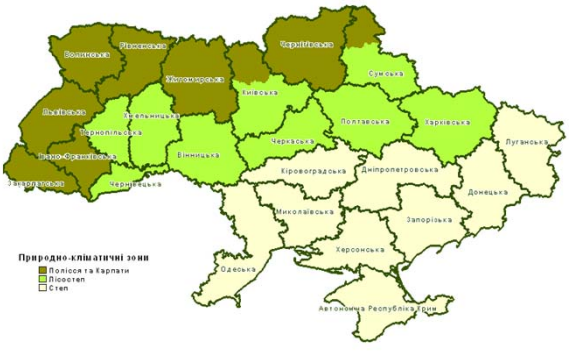
Methodology Council
State Veterinary and Phytosanitary Service of Ukraine

Scientific Board of the Institute

Methodology Council of the Institute

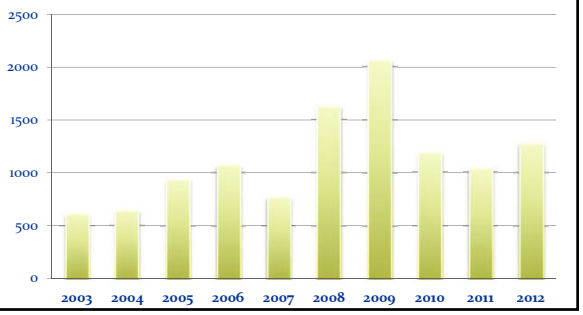
The Center for Certification Testing was established in 1995 year. Today, the Center is accredited by National Agency of Accreditation of Ukraine according to requirements of State Standard of Ukraine ISO/IEC 17025, Accreditation certificate No. 2T257 of 25.01.2011 p.
Personnel of the Center perform over 50 types of various examinations, which are carried out according to modern methods set out in the state, interstate standards and methodical guidelines

Climatic zones of Ukraine



Regional location of Plant Variety Examination Entities

Applications for Plant Varieties filed during 2003 to 2012



Issued in 2012:

- **788** certificates of variety state registration;
- **301** patents;
- **520** certificates of authorship;

Decisions made:

- on granting proprietary right of intellectual property for the dissemination of **261** plant varieties
- on granting proprietary rights of intellectual property for a plant variety as certified with patent for **465** plants varieties

Civil Code of Ukraine

Article 485. Types of intellectual property rights for a plant variety

Intellectual property right for a plant variety comprises:

Proprietary right of intellectual property for plant variety dissemination as certified with the act of state registration

Proprietary rights of intellectual property for a plant variety as certified with the patent;

Personal non-proprietary rights for a plant variety as certified with the act of state registration;

STAGES OF NATIONAL VARIETAL RESOURCES DEVELOPMENT

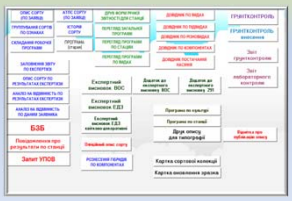
- Implementation of plant variety right protection system into external and internal priorities of development of state policy in budget, credit, price, insurance, tax and regulatory fields.
- Improvement of legislative, regulatory and science and methodical base in the field of plant variety rights protection.
- Development of cooperation scheme of governmental and nongovernmental entities in the course of the development of national plant resource.
- Development of R&D, innovational activities and the standardization in the field of intellectual property for plant varieties, including plant variety studying and seed science.
- Development of reference and information source database and scientific and advisory database for plant variety rights protection.

[Annex IV follows]

ANNEX IV

QUALIFYING EXAMINATION ON DISTINCTNESS, UNIFORMITY AND STABILITY

Qualifying Examination on Distinctness, Uniformity and Stability



UPOV Technical Working Party for Agricultural Crops (TWA)
42th session

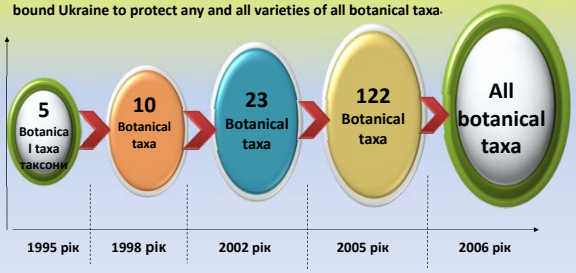
17.06.2013.

Kyiv-2013

Spokesperson:
S. Gryniv, Ph. D in agriculture, DUS Qualifying Examination Department Head

In 1995, Ukraine became a member to UPOV and acceded International Convention for the Protection of New Varieties of Plants, 1978 Act.

In 1995, Ukraine has acceded 1991 Act of the International Convention for the Protection of New Varieties of Plants as ratified by the Law of Ukraine on Right Protection for Plant Varieties dated 02.08.2006 No. 60-V. The ratification of International Convention for the Protection of New Varieties of Plants, 1991 Act, bound Ukraine to protect any and all varieties of all botanical taxa.



State registration of a plant variety is granted, where the variety is deemed to be Distinct, Uniform and Stable (DUS), it is designated with a denomination and it is suitable for dissemination in Ukraine (VCU).

Variety is deemed to be suitable for dissemination in Ukraine, where it is Distinct,Uniform and Stable, and could be used to satisfy the needs of society and is not banned for dissemination considering risks to life and health of the population, as well as potential harm to animal and plant world, environment protection.

Criteria for banning the dissemination of plant varieties in Ukraine are developed by the Entity and shall be approved by the central body of executive power dealing with agricultural policy issues.

Examination types

VCU – suitability of varieties for dissemination ;

DUS – distinctness, uniformity and stability;

VCS – variety collection studies;

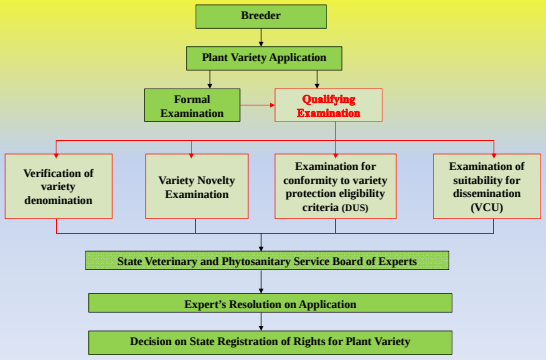
VCM– ensuring variety collection maintenance Ⓡ

PVS – Post-Registration Variety Studying;

AVE – Arbitrary Plant Variety Examination;

POST control – on-ground (plot, on-site) and laboratory varietal control.

Organizational structure for a Plant Variety Registration in Ukraine



Regulatory and methodological framework for the conduct of qualifying examination

1. Law of Ukraine on Right Protection for Plant Varieties
2. Guidance for the Conduct of Plant Varieties Qualifying Examination
3. List of Genera and Species, which varieties undergo DUS and VCU tests in the examination facilities of state plant variety right protection system
4. List of DUS and VCU test entities of state plant variety right protection system
5. Criteria for banning plant variety dissemination at the territory of Ukraine
6. Guidelines for the Conduct of DUS test (TGP 7/1,2) and VCU test

Methods of identification applied in the examination of plant varieties for Distinctness, Uniformity and Stability

- **Morphological description**
- Database for Plant Varieties Identification by reserve protein profiles development is in progress *(wheat, barley).*
- Searches for DNA markers to be used in DUS test are in progress *(soya, barley, maize, sunflower, wheat, sorghum, sugar beets).*

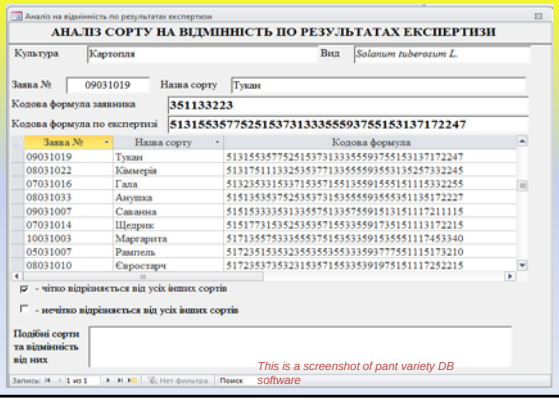
Distinctness, Uniformity and Stability (DUS) Examination

Examination at Examination Stations of the state system for plant variety protection

Examination at Applicant's field (by Applicant's data)

DUS-test is mainly based on field examination as conducted by relevant Examination Body (Ukrainian Institute for Plant Variety Examination), or according to field examination conducted by the Applicant (by Applicant's data).

Distinctness Examination



Uniformity and Stability Examination

UNIFORMITY

to assess uniformity subject to taxon, a population standard is set

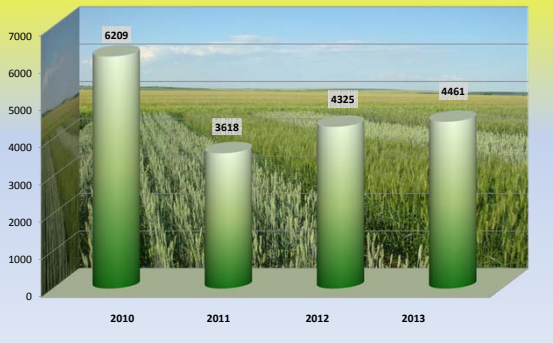
by percentage of off-types variety uniformity is assessed

STABILITY

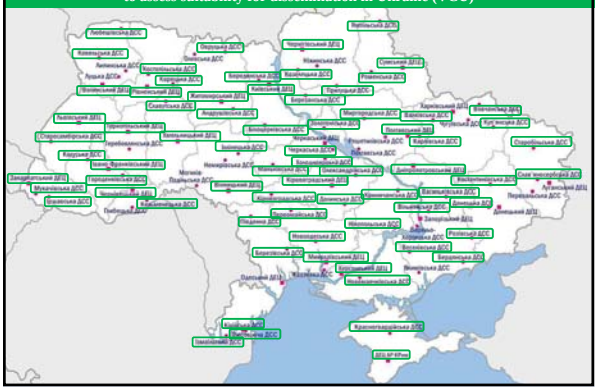
for hybrids : is determined by uniformity, where hybrid is uniform, a hybrid is deemed to be stable

for varieties: to be sown in second year with seed of previous and current year

Number of varieties in field tests for plant variety examination on DUS conducted by examination entities of the state system for plant variety right protection (2010 to 2013)

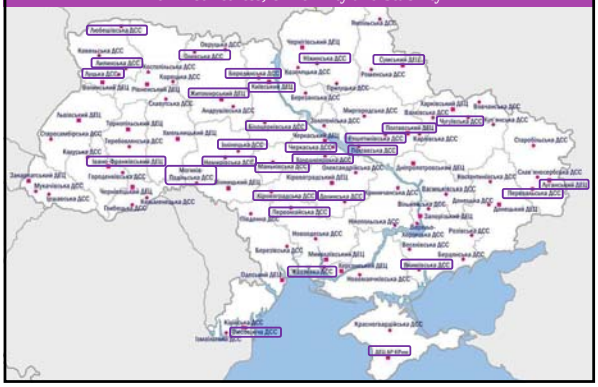


Examination entities conducting field tests of plant variety qualifying examination to assess suitability for dissemination in Ukraine (VCU)



Examination entities conducting field tests of plant variety qualifying examination

on Distinctness, Uniformity and Stability



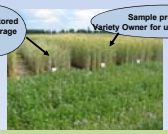
Samples of seed and planting material for long-term storage (official sample) and for the first year of examination shall be submitted along with application documents in compliance with the order of procedure set by the Entity

Ukrainian Institute for Plant Variety Examination, storage facility *(seed material)*

Field storage (Crimean Regional State Center for Variety Examination) *(planting material)*

Sample stored at the storage

Sample provided by Variety Owner for updating purposes



Official sample authenticity check *(case example of cereals)*

Maintaining planting material of vegetatively propagated plant varieties in the collections of common knowledge varieties according to fruit growing zones of Ukraine

11 examination entities– field collections

UPOV

Ukraine considers results of qualifying examination for distinctness, uniformity and stability conducted by Designated Authority of any UPOV member state

Thank You for Your Attention !

[Annex V follows]

ANNEX V

LIST OF LEADING EXPERTS

DRAFT TEST GUIDELINES TO BE SUBMITTED TO THE TECHNICAL COMMITTEE IN 2014

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

before August 2, 2013

Species	Basic Document	Leading expert(s)
*Groundnut (*Arachis* L.) (Revision)	TG/93/4(proj.3)	Mrs. Lynette Croukamp (ZA)
Kentucky Bluegrass (*Poa pratensis* L.) (Revision)	TG/33/7(proj.2)	Mrs. Beate Rücker (DE)
*Rhodesgrass (*Chloris gayana* Kunth)	TG/RHODES(proj.2)	Mr. Tanvir Hossain (AU)

DRAFT TEST GUIDELINES TO BE DISCUSSED AT TWA/43
(* indicates possible final draft Test Guidelines)

Guideline date for Subgroup draft to be circulated by Leading Expert: **August 8, 2014**
Guideline date for comments to Leading Expert by Subgroup: **September 15, 2014**

New draft to be submitted to the Office of the Union
before October 3, 2014

Species	Basic Document	Leading expert(s)	Interested experts (countries/organizations)
Adlay (*Coix ma-yuen* Roman.)	TG/COIX(proj.3)	Mr. Yoshiaki Takamatsu (JP)	CN, KR, ISF, Office
*Adzuki/Red bean (*Vigna angularis*)	TG/ADZUK(proj.2)	Mr. Masayuki Uchida (JP)	CN, KR, ISF, Office
*Cassava (*Manihot esculenta* Crantz.)	TG/CASSAV(proj.4) (rev.)	Mr. Simeon Kibet Kogo (KE), Mr. Fabrício Santana Santos (BR)	TWV, CN, CO, TZ, ZA, ISF, Office
Castor Bean (*Ricinus comunis* L.)	NEW	Mr. Adriaan de Villiers (ZA)	AR, BG, BR, FR, IT, QZ, UA, ESA, ISF, Office
Elytrigia (*Elytrigia elongata* (Host) Nevski), (*Agropyron elongatum* (Host) P. Beauv.)	TG/ELYTR(proj.3)	Mr. Alberto Ballesteros (AR)	HU, PL, QZ, ESA, ISF, Office
Finger millet (*Eleusine coracana* (L.) Gaertn.)	NEW	Ms. Nadiya Leschuk (UA)	BR, KE, TZ, ISF, Office
Ginseng (*Panax ginseng* C.A. Mey.) (Revision)	TG/224/1	Mr. Keun-Jin Choi (KR)	CN, JP, ESA, ISF, Office
Quinoa (*Chenopodium quinoa* Willd.)	NEW	Mr. Erik Lawaetz (DK)	AR, BR, CA, FR, NL, QZ, ZA, ESA, ISF, Office
*Scorpion Weed (*Phacelia tanacetifolia* Benth.)	TG/PHACE(proj.3)	Mrs. Bogna Kowalczyk (PL)	AT, CZ, DE, FR, QZ, RO, ISF, Office
*Sorghum (*Sorghum bicolor* L.) (Revision)	TG/122/4(proj.2)	Mr. Luis Salaices (ES)	AU, BR, CA, CL, CN, CZ, DE, FR, GB, HU, IT, JP, KE, QZ, RO, TZ, UA, ZA, ESA, ISF, Office
*Urochloa *(Brachiaria)*	TG/UROCH(proj.7)	Mr. Fabrício Santana Santos (BR)	AU, CO, MX, ZA, ISF, Office
Wheat (*Triticum aestivum L. emend. Fiori et Paol.*) (Revision)	TG/3/12(proj.2)	Mrs. Virginie Bertoux (FR)	AT, AU, BG, BR, CA, CL, CN, CZ, DE, DK, ES, FI, GB, HR, HU, IT, JP, KE, KR, NL, PL, QZ, RO, SK, UA, ZA, ESA, ISF, Office
Yellow Potato (*Solanum tuberosum* L. subsp. *andigenum*)	TG/SOL_TUB_AND (proj.1)	Mr. Rodolfo Caicedo (CO)	AR, AT, BR, CA, CN, CZ, DE, ES, FR, GB, IT, JP, KE, KR, NL, PL, QZ, SK, ZA, ESA,ISF, Office

[End of Annex V and of document]