



TC-EDC/Jan11/9

ORIGINAL: English

DATE: November 21, 2010

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

ENLARGED EDITORIAL COMMITTEE

Geneva, January 6, 2011

REVISION OF DOCUMENTS TC/38/14-CAJ/45/5 AND TC/38/14 ADD.-CAJ/45/5 ADD.

Document prepared by the Office of the Union

1. The purpose of this document is to provide background information in relation to document BMT/DUS Draft 4, to be considered by the Enlarged Editorial Committee (TC-EDC) at its meeting on January 6, 2011, and in relation to the possible development of document TGP/15, as follows:

- (a) Background to the revision of documents TC/38/14 CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add.;
- (b) Comments of the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) and the Technical Working Parties at their sessions in 2010 on:
 - (i) document BMT/DUS Draft 3; and
 - (ii) the possible development of document TGP/15; and
- (c) Background to the preparation of document BMT/DUS Draft 4.

Revision of documents TC/38/14 CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add.

2. Documents TC/38/14-CAJ/45/5 “*Ad Hoc* Subgroup of Technical and Legal Experts on Biochemical and Molecular Techniques (‘The BMT Review Group’)” and TC/38/14 Add.-CAJ/45/5 Add “Recommendations of the BMT Review Group and Opinion of the Technical Committee and the Administrative and Legal Committee Concerning Molecular Techniques”, summarize the consideration of possible application models proposed by the TC, on the basis of the work of the BMT and crop subgroups, for the utilization of biochemical and molecular techniques in the examination of Distinctness, Uniformity and Stability.

3. At its seventy-fourth session, held in Geneva on October 24, 2007, the Consultative Committee made a preliminary examination of document BMT Guidelines (proj.9), proposed for adoption by the Council. One of the recommendations of the Consultative Committee was that “consideration be given to the status of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. with regard to their reference in the introduction of document BMT Guidelines (proj.9)” .

4. With regard to the status of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add., the Consultative Committee, at its seventy-eighth session, held in Geneva on October 22, 2009, agreed that, unless otherwise agreed by the Council, documents which set out UPOV policies or guidance, once approved by the relevant UPOV Committees, as appropriate, must be adopted by the Council. In cases where a rapid presentation of a UPOV policy or guidance is required, such that adoption could not be achieved by presentation of a document to the Council, approval would be sought by correspondence from the representatives to the Council of the members of the Union (see document C/43/16 “Report”, paragraph 14(i)).

5. At its forty-fourth session, held in Geneva from April 7 to 9, 2008, the TC noted the request of the Consultative Committee that consideration be given to the status of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. with regard to their reference in the introduction of document BMT Guidelines. The TC noted that documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. would need to be reviewed in conjunction with discussions on the approach presented in documents BMT/10/14 and BMT-TWA/2/11 “Possible use of molecular techniques in DUS testing on maize: how to integrate a new tool to serve the effectiveness of protection offered under the UPOV system” (see document TC/44/13 “Report”, paragraph 150). On that basis, it agreed that it would be appropriate to submit a revised version of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. to the Council in conjunction with the BMT Guidelines.

6. At its forty-fifth session, held in Geneva from March 30 to April 1, 2009, the TC recalled that, at its forty-second session, held in Geneva, from April 3 to 5, 2006, it had “reaffirmed its support for the presentation of the situation, set out in documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add., which presented the proposals developed in the *Ad hoc* Crop Subgroups, the recommendations of the BMT Review Group concerning those proposals and the opinion of the TC and the CAJ regarding the recommendations of the BMT Review Group. [...]”. Therefore, it did not consider that it would be appropriate to make major changes to the structure and form of the information provided in documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. However, to assist the Office of the Union in the preparation of the revision of documents

TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add., with the aim of developing a document for adoption by the Council, the TC agreed:

(a) to consolidate document TC/38/14-CAJ/45/5, paragraphs 9 and 10 and the Annex, and document TC/38/14 Add.-CAJ/45/5 Add., paragraphs 3 to 7, into a single document;

(b) subject to a positive assessment by the BMT Review Group of the approach presented in documents BMT/10/14 and BMT-TWA/Maize/2/11 and endorsement by the TC and CAJ, to add a section concerning the approach presented in documents BMT/10/14 and BMT-TWA/Maize/2/11; and

(c) to emphasize the importance of the assumptions to be met in each of the options and proposals and to clarify that it is a matter for the relevant authority to consider if the relevant assumptions set out in documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. are met.

7. Subject to a positive assessment by the BMT Review Group of the approach presented in documents BMT/10/14 and BMT-TWA/Maize/2/11 and an endorsement by the CAJ at its sixtieth session, the TC agreed that a first draft of the revised version of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. should be prepared for consideration by the TC at its forty-sixth session and by the CAJ at its sixty-first session, both in March 2010 (see document TC/45/16 "Report", paragraphs 152 and 153). On that basis, the TC noted that a document could be presented for adoption by the Council in 2010, in conjunction with the BMT Guidelines.

8. The CAJ, at its sixtieth session, agreed that a first draft of the revised version of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add. should be prepared for consideration by the TC at its forty-sixth session and by the CAJ at its sixty-first session, both in March 2010. On that basis, the CAJ noted that a document could be presented for adoption by the Council in October 2010, in conjunction with the BMT Guidelines (see document CAJ/60/10 "Report on the Conclusions", paragraph 46).

9. In accordance with the procedure set out above, the Office of the Union prepared a revised version of documents TC/38/14-CAJ/45/5 and TC/38/14 Add.-CAJ/45/5 Add., with the aim of developing a document for adoption by the Council. That document (document BMT/DUS Draft 1 "Possible Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)") was presented to the TC-EDC, at its meeting on January 7, 2010.

10. The TC-EDC, at its meeting on January 7, 2010, did not comment on document BMT/DUS Draft 1 in detail, considering that it would be more appropriate for the TC to make a first assessment of that document at its forty-sixth session. On that basis, document BMT/DUS Draft 2, considered by the TC at its forty-sixth session, and by the CAJ at its sixty-first session, contained no changes to the text of document BMT/DUS Draft 1. However, the TC-EDC recommended that the TC consider whether the document might take on the reference "document TGP/15" (TGP/15 currently has the title "New Types of Characteristics"), subject to an appropriate change of title of document TGP/15.

11. At its forty-sixth session, held in Geneva from March 22 to 24, 2010 (see document TC/46/15 "Report on the Conclusions", paragraphs 43 to 45), the TC agreed the following amendments to document BMT/DUS Draft 2:

Title	to read "Possible Use of Molecular Markers in the Examination of Distinctness, Uniformity and Stability ("DUS")"
Structure	to differentiate the models into those which received a positive endorsement by the BMT Review Group, CAJ and TC and those where there was no consensus on their acceptability. Within the models which received a positive endorsement by the BMT Review Group, CAJ and TC, to consider a further separation of the models for which further work was required.
Title of models	to seek to develop a short title for each model

12. The TC noted that the CAJ, at its sixtieth session, had agreed that a document could be presented for adoption by the Council in October 2010, in conjunction with the document BMT Guidelines. However, the TC agreed that a new draft of the document BMT/DUS should be prepared by the Office of the Union, in conjunction with the TC Chairman and the BMT Chairman, for consideration by the BMT and the TWPs at their sessions in 2010 and a further draft prepared on the basis of the comments of the BMT, TWPs and CAJ for consideration by the TC at its forty-seventh session.

13. The TC agreed that the possibility of document BMT/DUS Draft 2 becoming document TGP/15, with an appropriate change of title for TGP/15, should be considered at a later stage.

14. The CAJ, at its sixty-first session, held in Geneva on March 25, 2010 (see document CAJ/61/11 "Report on the Conclusions", paragraphs 60 to 62), noted the conclusions of the TC on document BMT/DUS Draft 2. The CAJ noted that the TC had agreed that a new draft of the document BMT/DUS should be prepared by the Office of the Union, in conjunction with the TC Chairman and the BMT Chairman, for consideration by the BMT and the TWPs at their sessions in 2010 and a further draft prepared on the basis of the comments of the BMT and TWPs for consideration by the TC at its forty-seventh session.

Comments by the BMT and the Technical Working Parties at their sessions in 2010

Document BMT/DUS Draft 3

15. The Technical Working Party on Automation and Computer Programs (TWC), at its twenty-eighth session, held in Angers, France, from June 29 to July 2, 2010, made no comments on document BMT/DUS Draft 3.

16. The following comments were made on document BMT/DUS Draft 3, as indicated, by:

- (a) the BMT, at its twelfth session, held in Ottawa from May 11 to 13, 2010, considered document BMT/DUS Draft 3 (see document BMT/12/24 "Report", paragraphs 7 and 8);

(b) the Technical Working Party for Agricultural Crops (TWA), at its thirty-ninth session, held in Osijek, Croatia, from May 24 to 28, 2010 (see document TWA/39/27 “Report”, paragraphs 29 to 32);

(c) the Technical Working Party for Vegetables (TWV), at its forty-fourth session, held in Veliko Tarnovo, Bulgaria, from July 5 to 9, 2010 (see document TWV/44/34 “Report”, paragraphs 25 to 27);

(d) The Technical Working Party for Ornamental Plants and Forest Trees (TWO), at its forty-third session, held in Cuernavaca, Morelos State, Mexico, from September 20 to 24, 2010 (see document TWO/43/29 Rev. “Report”, paragraphs 24 to 26); and

(e) the Technical Working Party for Fruit Crops (TWF), at its forty-first session, held in Cuernavaca, Morelos State, Mexico, from September 27 to October 1, 2010 (see document TWF/41/30 Rev. “Report”, paragraph 24).

General	(BMT, agreed by TWA and TWV) to delete all references to the terms “Option” and “Proposal” and to replace with the terms “Model” and “Example”
	(BMT, agreed by TWA and TWV) to replace all references to “molecular characteristics” with an appropriate term such as “molecular markers”. The TWA noted that “molecular markers” were a tool and concluded that the term “molecular markers” might not be an appropriate term to refer to the data or information generated by those markers. It considered that terms such as “molecular data”, “molecular marker data” and “molecular polymorphism”, should be considered. The TWV agreed that the term “molecular data” would be a suitable broad term.
	(TWA, agreed by TWV) to seek to develop shorter names for the models and to avoid any use of numbering in association with the models, i.e. to remove the indications of 3.1.1, 3.1.2, 3.1.3 and 3.2.1.
3.1.2	(BMT, agreed by TWA and TWV) to clarify that the phenotypic distance is based on phenotypic characteristics and to indicate that the GAIA threshold would need to be selected on a case-by-case basis. The TWV noted that the model “System for combining phenotypic and molecular distances in the management of variety collections” would not necessarily require the GAIA method to be used to calculate phenotypic distance, but noted that any other method would need to be based on a similar “combination of differences observed on phenotypic characteristics, where each difference contributes to the distance according to the reliability of the characteristics, especially regarding its variability and its susceptibility to environment” (see document BMT/DUS Draft 3, Annex 4, Section 1.4.1) in order to fall within the model.
3.1.3	(BMT, agreed by TWA) to read “Calibration of molecular distances in the management of variety collections (see Annex 2)”

	The TWV agreed that the title should read “Calibration of molecular and traditional distances in the management of variety collections (see Annex 2)” or “Calibration of distances in the management of variety collections (see Annex 2)”
Annex 2	(TWO) paragraph 12 to be amended to read “[...] The situation in which different decisions on distinctness would result can only be investigated where varieties are rejected for <u>lack of</u> distinctness in the growing trial. This would require analysis of pairs of varieties rejected for <u>lack of</u> distinctness in the past or, if such material is unavailable, a system of “parallel running” of the two systems in real time on candidate varieties. [...]”

Possible development of document TGP/15

17. The BMT agreed that document TGP/15 should be developed separately, but in parallel, to document BMT/DUS. The content of document BMT/DUS would be similar to BMT/DUS Draft 3, i.e. it would explain the development and consideration of all models within UPOV. However, document TGP/15 would contain only models that had received a positive assessment and for which accepted examples could be provided, i.e. Models “Characteristic-specific molecular markers” (Section 3.1.1) and “Combining phenotypic [characteristics] and molecular distances in the management of variety collections” (Section 3.1.2) for the time being.

18. The TWA, TWV, TWO and TWF agreed that document TGP/15 should be developed separately, but in parallel, to document BMT/DUS on the basis that document BMT/DUS would provide a report on the development and consideration of all models within UPOV and that document TGP/15 would provide guidance for the use of those models that had received a positive assessment and for which accepted examples could be provided, i.e. Models “Characteristic-specific molecular markers” (Section 3.1.1) and “Combining phenotypic [characteristics] and molecular distances in the management of variety collections” (Section 3.1.2) for the time being. The TWA and TWV agreed that the purpose of both documents should be clarified within the documents and noted that both documents would need to be adopted by the Council. The TWA and TWV agreed that consideration should be given to how to maintain both documents in an efficient way.

Background to the preparation of document BMT/DUS Draft 4

19. On the basis of the comments of the BMT and the Technical Working Parties at their sessions in 2010, the following proposals have been developed by the Chairman of the Technical Committee, Mr. Joël Guiard, the Chairman of the BMT, Mr. Andrew Mitchell, and the Office of the Union, and have been incorporated in document BMT/DUS Draft 4:

General	to delete all references to the terms “Option” and “Proposal” and to replace with the terms “Model” and “Example” <i>document BMT/DUS Draft 4: done</i>
	to replace all references to “molecular characteristics” with an appropriate term such as “molecular markers”.

	<p><i>document BMT/DUS Draft 4: the term “molecular characteristics” has been replaced by “molecular markers”</i></p>
	<p>to seek to develop shorter names for the models and to avoid any use of numbering in association with the models, i.e. to remove the indications of 3.1.1, 3.1.2, 3.1.3 and 3.2.1.</p> <p><i>document BMT/DUS Draft 4: the following short names are proposed:</i></p> <p style="padding-left: 40px;"><i>Characteristic-specific molecular markers (previously Option 1(a))</i></p> <p style="padding-left: 40px;"><i>Combining phenotypic and molecular distances (“New” model – maize example)</i></p> <p style="padding-left: 40px;"><i>Calibration of molecular distance (previously Option 2)</i></p> <p style="padding-left: 40px;"><i>Use of molecular markers as independent characteristics (previously Option 3)</i></p>
3.1.2	<p>to clarify that the phenotypic distance is based on phenotypic characteristics and to indicate that the GAIA threshold would need to be selected on a case-by-case basis.</p> <p>The TWV noted that the model “System for combining phenotypic and molecular distances in the management of variety collections” would not necessarily require the GAIA method to be used to calculate phenotypic distance, but noted that any other method would need to be based on a similar “combination of differences observed on phenotypic characteristics, where each difference contributes to the distance according to the reliability of the characteristics, especially regarding its variability and its susceptibility to environment” (see document BMT/DUS Draft 3, Annex 4, Section 1.4.1) in order to fall within the model.</p> <p><i>No change proposed in document BMT/DUS Draft 4: to be considered by the TC-EDC and Technical Committee</i></p>
3.1.3	<p>to read “Calibration of molecular distances in the management of variety collections (see Annex 2)”</p> <p>The TWV agreed that the title should read “Calibration of molecular and traditional distances in the management of variety collections (see Annex 2)” or “Calibration of distances in the management of variety collections (see Annex 2)”</p> <p><i>document BMT/DUS Draft 4: see proposed new titles under “General”</i></p>
Annex 2	<p>(TWO) paragraph 12 to be amended to read “[...] The situation in which different decisions on distinctness would result can only be investigated where varieties are rejected for <u>lack of</u> distinctness in the growing trial. This would require analysis of pairs of varieties rejected for <u>lack of</u> distinctness in the past or, if such material is unavailable, a system of “parallel running” of the two systems in real time on candidate varieties. [...]”</p> <p><i>document BMT/DUS Draft 4: done</i></p>