

**Working Group on Biochemical and Molecular Techniques
and DNA-Profiling in Particular**

BMT/19/7

**Nineteenth Session
Alexandria, United States of America, September 23 to 25, 2020**

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ORGANIZATION OF WORK OF THE TWC AND BMT

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EXECUTIVE SUMMARY

1. The purpose of this document is to present draft terms of reference for a possible single body to encompass the work of the Technical Working Party on Automation and Computer Programs (TWC) and the Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT).
2. The BMT is invited to consider the draft terms of reference for a possible single body to encompass the work of the TWC and BMT, as set out in paragraph 19 of this document.
3. The structure of this document is as follows:

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4. The following abbreviations are used in this document:

BMT:	Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular
TC:	Technical Committee
TWC:	Technical Working Party on Automation and Computer Programs
TWPs:	Technical Working Parties

BACKGROUND

Consideration by the Technical Committee at its fifty-fourth session

5. The TC, at its fifty-fourth session, held in Geneva on October 29 and 30, 2018, agreed the draft agenda for the BMT at its eighteenth session, as set out in document TC/54/11 Add., paragraph 69 (see document TC/54/31 “Report”, paragraphs 283 to 286).
6. The TC received the following proposal from the Chairpersons of the TWC and BMT for matters to be considered on September 16, 2019, in order to facilitate discussion and cooperation between the TWC and BMT. The TC noted that the TWC would meet on the morning of September 16 and the BMT would meet later that day and the items below would be considered at the TWC or BMT session as appropriate.

7. The TC agreed the following items for Wednesday, September 16, 2019:

Reports on developments in UPOV concerning biochemical and molecular techniques (document to be prepared by the Office of the Union)
Variety description databases (document to be prepared by the Office of the Union and documents invited)
Management of databases and exchange of data and material (papers invited)
Building a database with molecular marker information for the management of variety collections (documents invited)
Review of document UPOV/INF/17 "Guidelines for DNA-Profiling: Molecular Marker Selection and Database Construction"
Methods for analysis of molecular data (papers invited)
Exchange and use of software and equipment (document to be prepared by the Office of the Union and documents invited) - Report on developments of a software tool for marker selection using the traveling salesman algorithm
DNA markers as supporting information for DUS decisions in potatoes (document to be prepared by the Netherlands)
A single tool for DUS computation process (document to be prepared by France)

8. The TC noted that the exact timings for discussion of the items during that day would depend on the number of discussion papers received.

Consideration by the Technical Working Party on Automation and Computer Programs

9. The TWC, at its thirty-seventh session, held in Hangzhou, China, from October 14 to 16, 2019, considered the organization of the TWC and BMT meetings in the same week (see document TWC/37/12 "Report", paragraphs 115 to 119).

10. The TWC noted the duplication of content presented at both the TWC and BMT meetings and agreed there should be a single opening and introductory parts for both meetings at the same time.

11. The TWC agreed that agenda items scheduled for discussion at its thirty-eighth session should be focused on relevant items for the group and all other items presented for information only.

12. The TWC agreed that agenda items should be grouped by topic in different days and participants informed in advance of the order of discussion.

13. The TWC agreed that the above proposals could enable the allocation of time during the meeting for a technical visit.

Consideration by the Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular

14. The BMT, at its eighteenth session, held in Hangzhou, China, from October 16 to 18, 2019, considered the organization of the TWC and BMT meetings on the same week. The BMT agreed with the TWC there was a duplication of content presented at the TWC and BMT meetings and agreed there should be a single opening and introductory parts for both meetings at the same time (see document BMT/18/21 "Report", paragraphs 75 and 76).

15. The BMT agreed with the TWC that the above proposals could enable the allocation of time during the meeting for a technical visit.

Consideration by the Technical Committee at its fifty-fifth session

16. The TC, at its fifty-fifth session, held in Geneva on October 28 and 29, 2019, considered the outcomes of organizing the sessions of the TWC and BMT in the same week (see document TC/55/25 "Report", paragraphs 136 to 138).

17. The TC noted the reports of the TWC and BMT on the duplication of content presented at both the TWC and BMT meetings and that the TWC and BMT had agreed there should be a single opening and introductory parts for both meetings at the same time. It further noted the challenge for the host of the joint sessions to hold two opening ceremonies and two receptions.

18. The TC noted the comments and proposals by the TWC and BMT on organizing the sessions in the same week and agreed to invite the Office of the Union to prepare draft terms of reference for a possible single body to encompass the work of the TWC and BMT for consideration at the TWC and BMT and reporting at the other TWPs, at their sessions in 2020. The possible terms of reference would then be considered by the TC, in conjunction with the comments of the TWC and BMT, at its fifty-sixth session in 2020.

DRAFT TERMS OF REFERENCE FOR A POSSIBLE SINGLE BODY TO ENCOMPASS THE WORK OF THE TWC AND BMT

19. The following draft terms of reference are proposed for a possible single body to encompass the work of the TWC and BMT:

Title:

Technical Working Party on Testing Methods and Techniques

Tasks:

As directed by the Technical Committee, to:

- (a) Consider methods relevant for the examination of DUS.
- (b) Review and provide guidance on software and equipment relevant for:
 - (i.) DUS trial design and data analysis
 - (ii.) Data recording and transfer
 - (iii.) Image analysis
 - (iv.) Biochemical and molecular data.
- (c) Consider matters relating to trial design and data analysis;
- (d) Consider the possible application of biochemical and molecular techniques in DUS testing;
- (e) Develop guidelines regarding the management and harmonization of databases;
- (f) If appropriate, establish guidelines for biochemical and molecular methodologies and their harmonization;
- (g) Review general developments in biochemical and molecular techniques;
- (h) Maintain an awareness of relevant applications of biochemical and molecular techniques in plant breeding;
- (i) Provide a forum for discussion on the use of biochemical and molecular techniques in the consideration of essential derivation and variety identification;

20. The BMT is invited to consider the draft terms of reference for a possible single body to encompass the work of the TWC and BMT, as set out in paragraph 19 of this document.

[Annex follows]

ANNEX

TERMS OF REFERENCE OF THE TECHNICAL WORKING PARTY ON AUTOMATION AND COMPUTER PROGRAMS (TWC) AND OF THE WORKING GROUP ON BIOCHEMICAL AND MOLECULAR TECHNIQUES, AND DNA-PROFILING IN PARTICULAR (BMT)

Technical Working Party on Automation and Computer Programs (TWC)

The TC at its eighteenth session, from November 17 to 19, 1982, established the Technical Working Party on Automation and Computer Programs (TWC) (see document TC/XVIII/13 "Report of the eighteenth session of the TC", Geneva, November 17 to 19, 1982, paragraph 32):

"The first task of the Working Party would be to prepare an inventory of the existing programs and methods of data processing. Thereafter it would concentrate on the following two topics:

"(i) A study of the problem of codification and standardization of entries, in order to make an exchange of information compatible;

"(ii) The preparation of a comparative analysis of the methods used for cross fertilized plants in the testing of distinctness, homogeneity and stability and in the statistical interpretation of the data obtained and of a proposal for an improved common solution."

The Council at its seventeenth ordinary session, on October 14, 1983 approved the establishment by the TC of the TWC (see document C/XVII/15 "Report of the seventeenth ordinary session of the Council", Geneva, October 12 to 14, 1983, paragraph 116).

Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT)

The Council at its twenty-sixth ordinary session, on October 29, 1992, agreed to establish the Working Group on Biochemical and Molecular Techniques, DNA-Profiling in Particular (BMT) (see document C/26/15 Report of the twenty-sixth ordinary session of the Council, Geneva, October 29, 1992, paragraph 27).

The TC at its thirty-eighth session, from April 15 to 17, 2002, agreed the future role of the BMT as follows (see document TC/38/16 Report of the thirty-eighth session of the TC, Geneva, April 15 to 17, 2002, paragraph 204):

The BMT is a group open to DUS experts, biochemical and molecular specialists and plant breeders, whose role is to:

- (i) Review general developments in biochemical and molecular techniques;
- (ii) Maintain an awareness of relevant applications of biochemical and molecular techniques in plant breeding;
- (iii) Consider the possible application of biochemical and molecular techniques in DUS testing and report its considerations to the TC;
- (iv) If appropriate, establish guidelines for biochemical and molecular methodologies and their harmonization and, in particular, contribute to the preparation of document TGP/15, "New Types of Characteristics." These guidelines to be developed in conjunction with the Technical Working Parties;
- (v) Consider initiatives from TWPs, for the establishment of crop specific subgroups, taking into account available information and the need for biochemical and molecular methods;
- (vi) Develop guidelines regarding the management and harmonization of databases of biochemical and molecular information, in conjunction with the TWC;
- (vii) Receive reports from Crop Subgroups and the BMT Review Group;
- (viii) Provide a forum for discussion on the use of biochemical and molecular techniques in the consideration of essential derivation and variety identification.