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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

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**TECHNICAL
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LEGAL COMMITTEE****Forty-Fifth Session
Geneva, April 18, 2002**

ADDENDUM TO DOCUMENT TC/38/14 – CAJ/45/5

**AD HOC SUBGROUP OF TECHNICAL AND LEGAL EXPERTS
ON BIOCHEMICAL AND MOLECULAR TECHNIQUES
("THE BMT REVIEW GROUP")**

Recommendations of the BMT Review Group
and Opinion of the Technical Committee
and the Administrative and Legal Committee
Concerning Molecular Techniques

Document prepared by the Office of the Union

Introduction

1. The purpose of this document is to present to the Technical Working Parties the recommendations of the *Ad Hoc* Subgroup of Technical and Legal Experts on Biochemical and Molecular Techniques concerning the possible use of molecular techniques in DUS Testing and the opinion of the Technical Committee and the Administrative and Legal Committee on these recommendations. This document also reports the conclusion of the Technical Committee regarding the future program for the work of the *Ad Hoc* Crop Subgroups and the future role of the Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular.

2. The following codes/abbreviations are used in this document:

CAJ: Administrative and Legal Committee
TC: Technical Committee
TWP: Technical Working Party

TWA: Technical Working Party for Agricultural Crops
TWC: Technical Working Party on Automation and Computer Programs
TWF: Technical Working Party for Fruit Crops
TWO: Technical Working Party for Ornamental Plants and Forest Trees
TWV: Technical Working Party for Vegetables
BMT: Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular

BMT Review Group: *Ad Hoc* Subgroup of Technical and Legal Experts on Biochemical and Molecular Techniques

Crop Subgroups: *Ad Hoc* Crop Subgroups

Recommendations of the BMT Review Group

3. The BMT Review Group, established by the TC and the CAJ, met on April 16, 2002, under the chairmanship of the Vice Secretary-General to consider the proposals for the use of biochemical and molecular techniques contained in document TC/38/14 – CAJ/45/5, Annex. It concluded as follows:

Proposal 1 (Option 1(a) for a gene specific marker of a phenotypic characteristic) was, on the basis of the assumptions in the proposal, acceptable within the terms of the UPOV Convention and would not undermine the effectiveness of protection offered under the UPOV system.

Proposals 2, 3 and 4 (Option 2: Calibration of threshold levels for molecular characteristics against the minimum distance in traditional characteristics for Oilseed Rape, Maize and Rose, respectively), where used for the management of reference collections were, on the basis of the assumptions in the proposals, acceptable within the terms of the UPOV Convention and would not undermine the effectiveness of protection offered under the UPOV system.

Regarding Proposal 5 (Option 3 for Rose) and Proposal 6 (Option 3 for Wheat), it noted there was no consensus on the acceptability of these proposals within the terms of the UPOV Convention and no consensus on whether they would undermine the effectiveness of protection offered under the UPOV system. Concerns were raised that, in these proposals, using this approach, it might be possible to use a limitless number of markers to find differences between varieties. The concern was also raised that differences would be found at the genetic level which were not reflected in morphological characteristics.

4. The Vice Secretary-General also made the following general remarks. Firstly, concern had been raised regarding the accessibility of techniques covered by patents. Secondly, the group had emphasized the importance of considering if there were cost benefits arising from any new approaches. Thirdly, the importance of the relationship between phenotypic

characteristics and molecular techniques had also been discussed. Finally, the importance of examining uniformity and stability on the same characteristics as used for distinctness had been emphasized.

Opinion of the TC and the CAJ regarding the recommendations of the BMT Review Group

5. The TC considered the conclusions of the BMT Review Group and agreed with those conclusions, namely that proposals 1, 2, 3 and 4 could be pursued on the basis of the assumptions, whilst recognizing the need for further work to examine these assumptions and, in the case of option 2 proposals (2, 3 and 4), to improve the relationship between morphological and molecular distances. It also noted the divergence of views which had been expressed regarding proposals 5 and 6.

6. The TC agreed to the following schedule for reporting the outcome of the BMT Review Group meeting.

(a) The BMT Review Group recommendations to be reported to the CAJ with the views of the Technical Committee.

(b) The Office of the Union to produce a document (this document), containing these recommendations and the considerations of the TC and CAJ, for circulation to the TWPs.

(c) The TWPs to consider this document and to consider detailed reports of the work of Crop Subgroups.

(d) The views of the relevant TWP to be presented at the meeting of the Crop Subgroups.

7. The CAJ agreed with the conclusions of the BMT Review Group and endorsed the opinion of the TC.

Future Program for the Work of the Crop Subgroups

8. The TC agreed the following program for the existing Crop Subgroups:

(a) Maize: no future meeting to be planned at this stage, subject to consideration by the TWA;

(b) Oilseed Rape: to meet sometime after (not in conjunction with) the next TWA meeting, but before the next session of the BMT;

(c) Rose: to meet before the next TWO meeting;

(d) Tomato: no future meeting to be planned at this stage, subject to consideration by the TWV;

(e) Wheat: to meet sometime after (not in conjunction with) the next TWA meeting, but before the next session of the BMT.

9. The TC agreed to the establishment of new Crop Subgroups as follows:
- (a) Sugarcane: to hold its first meeting immediately after, and in association with, the next TWA meeting;
 - (b) Potato: to hold its first meeting immediately after, and in association with, the next TWA meeting;
 - (c) Mushroom: to hold its first meeting immediately after, and in association with, the next TWV meeting;
 - (d) Soybean: to hold its first meeting immediately after, and in association with, the next TWA meeting, if there is sufficient interest amongst experts.
10. The TC agreed that interim Chairpersons of the new Crop Subgroups should be agreed between the Chairman of the TC and the Chairperson of the relevant TWP and that these positions should then be considered for approval by the TC at its meeting in Spring 2003. It agreed that a Crop Subgroup should not be established for peach or citrus at this time.

Future Role of the BMT

11. The TC reviewed the role of the BMT in response to recent developments in UPOV, regarding biochemical and molecular techniques and, in particular, the establishment of the BMT Review Group and Crop Subgroups. It based its discussions on the proposal from the BMT contained in document TC/38/3, paragraph 24 (Box 1). On this basis, it agreed the future role of the BMT as follows:

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 Technical Committee;
- (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.

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