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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

WORKING GROUP ON BIOCHEMICAL AND MOLECULAR TECHNIQUES AND DNA PROFILING IN PARTICULAR

Tenth Session
Seoul, November 21 to 23, 2006

GUIDELINES FOR DNA-PROFILING: MOLECULAR MARKER SELECTION AND DATABASE CONSTRUCTION "BMT GUIDELINES"

Document prepared by the Office of the Union

1. The Working Group on Biochemical and Molecular Techniques and DNA-Profiling in Particular (BMT) concluded, at its eighth session in Tsukuba, Japan, from September 3 to 5, 2003, that there was an urgent need to harmonize methodologies for the generation of molecular data in order to ensure that the quality of the data produced would be universally acceptable for use in variety characterization. It was also noted that it would be useful to provide guidance on the planning of databases for molecular data based on different types of markers. On that basis, the BMT agreed that the Office should prepare a guidance document ("BMT Guidelines").

2. Document BMT Guidelines (proj.5), considered by the TC at its forty-second session in April 2006, reflected the comments made at the twenty-third session of the Technical Working Party on Automation and Computer Programs (TWC), the ninth session of the BMT and the Enlarged Editorial Committee (TC-EDC) meeting of January 10, 2006.

3. The TC agreed to request the BMT at its tenth session, to be held in Seoul, Republic of Korea, from November 21 to 23, 2006, to review a new draft of the BMT Guidelines (BMT Guidelines (proj.6)), incorporating the comments made at the forty-second session of the TC, and also agreed to invite the TWC to consider that draft at its twenty-fourth session, which was held in Nairobi, Kenya, from June 19 to 22, 2006.

4. The TWC considered document BMT Guidelines (proj.6) at its twenty-fourth session, held in Nairobi, Kenya, from June 19 to 22, 2006, and made the following comments:

Section 4.3	Several experts considered that Section 4.3 Sample size should provide more guidance on the selection of the sample size, in particular in the case of cross-pollinated varieties. An expert from Kenya noted that the size of the sample becomes more relevant in the case of expensive seed, such as hybrid varieties of some horticultural crops.
Section 4.4	The expert from the Netherlands considered that section 4.4 should be reworded to stress the importance of storing the DNA reference sample.
Section 5.2.1	An expert from Kenya considered it to be very difficult to standardize the quality criteria proposed in paragraph 5.2.1 (d) and (e). The expert from the Russian Federation agreed, but he thought that this problem could be solved by the development of special kits which could be transferred to the laboratories, as used for some techniques in medical practice.
Section 6	Mr. Sylvain Grégoire (France) introduced section 6 "Databases" of the BMT Guidelines. Mr. Grégoire noted that the aim of the section was to provide the minimum structure for a useful database, and hence a minimum structure that could be exchanged, but also that each UPOV member could expand. He reported on the work which was under development within the European Union in oilseed rape, with the participation of Denmark, France, Germany and the United Kingdom, and in maize, with the participation of Germany and Spain. He further explained that the projects started with a large number of markers which were gradually reduced and added that one of the most difficult aspects to harmonize between the laboratories was the coding of the markers. An expert from Germany explained that, for the developers of the database, it was necessary to obtain good quality data, and to develop a good structure, but for the crop experts the presentation of the data was most relevant.

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