



CAJ/70/6

ORIGINAL: English

DATE: August 6, 2014

**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**

Geneva

**ADMINISTRATIVE AND LEGAL COMMITTEE****Seventieth Session  
Geneva, October 13, 2014**

## MOLECULAR TECHNIQUES

*Document prepared by the Office of the Union**Disclaimer: this document does not represent UPOV policies or guidance*

1. The purpose of this document is to report on developments concerning the presentation of 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.

2. The following abbreviations are used in this document:

CAJ: Administrative and Legal Committee  
TC: Technical Committee

**PRESENTATION OF 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**

3. The TC, at its forty-ninth session, held in Geneva from March 18 to 20, 2013, agreed 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. That information should explain the potential advantages and disadvantages of the techniques, and the relationship between genotype and phenotype, which lay behind the situation in UPOV (see document TC/49/41 "Report on the Conclusions", paragraph 136).

4. The Consultative Committee, at its eighty-sixth session, held in Geneva on October 23 and 24, 2013, considered a series of answers to frequently asked questions. One of the questions included was "does UPOV allow molecular techniques (DNA profiles) in the DUS examination?" In that regard the Consultative Committee agreed that the answer should be developed via the TC.

5. The TC, at its fiftieth session, held in Geneva from April 7 to 9, 2014, agreed that the following explanation provided suitable information on the situation in UPOV with regard to the use of molecular techniques for breeders and persons with knowledge of DUS testing (see document TC/50/36 "report on the Conclusions", paragraph 84):

Question: Does UPOV allow molecular techniques (DNA profiles) in the DUS examination?

Answer: "It is important to note that, in some cases, varieties may have a different DNA profile but be phenotypically identical, whilst, in other cases, varieties which have a large phenotypic difference may have the same DNA profile for a particular set of molecular markers (e.g. some mutations).

“In relation to the use of molecular markers that are not related to phenotypic differences, the concern is that it might be possible to use a limitless number of markers to find differences between varieties at the genetic level that are not reflected in phenotypic characteristics.

“On the above basis, UPOV has agreed the following uses of molecular markers in relation to DUS examination:

“(a) Molecular markers can be used as a method of examining DUS characteristics that satisfy the criteria for characteristics set out in the General Introduction if there is a reliable link between the marker and the characteristic.

“(b) A combination of phenotypic differences and molecular distances can be used to improve the selection of varieties to be compared in the growing trial if the molecular distances are sufficiently related to phenotypic differences and the method does not create an increased risk of not selecting a variety in the variety collection which should be compared to candidate varieties in the DUS growing trial.

“The situation in UPOV is explained in documents TGP/15 ‘Guidance on the Use of Biochemical and Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)’ and UPOV/INF/18 ‘Possible use of Molecular Markers in the Examination of Distinctness, Uniformity and Stability (DUS)’”.

6. With regard to a wider audience, the TC agreed that the question was not framed in an appropriate way and, therefore, it would not be appropriate to seek to develop an answer to that question. The TC agreed that the question should be rephrased after clarification of the issues of interest to a wider audience (see document TC/50/36 “Report on the Conclusions”, paragraph 85).

7. At its sixty-ninth session, held in Geneva on April 10, 2014, the CAJ noted the explanation proposed by the TC at its fiftieth session.

8. The Council, at its thirty-first extraordinary session, held in Geneva on April 11, 2014, adopted the answer to the frequently asked question proposed by the TC at its fiftieth session (see documents Annex to document C(Extr.)/31/3 “Report by the President on the work of the eighty-seventh session of the Consultative Committee; adoption of recommendations, if any, prepared by that Committee” and C(Extr.)/31/5 “Report on the Decisions”, paragraph 15).

9. The Consultative Committee, at its eighty-seventh session, held in Geneva on April 11, 2014, requested the Office of the Union to prepare a draft question and answer with regard to the information on the situation in UPOV with regard to the use of molecular techniques for a wider audience, including the public in general, on the basis of contributions from the members of the Union. The draft question and answer will be considered by the Consultative Committee, at its eighty-eighth session, to be held in Geneva on October 15, 2014.

*10. The CAJ is invited to note that the Consultative Committee has requested the Office of the Union to prepare a draft question and answer with regard to the information on the situation in UPOV with regard to the use of molecular techniques for a wider audience, including the public in general, on the basis of contributions from the members of the Union.*

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