

Technical Committee**TC/57/INF/9 Add.****Fifty-Seventh Session
Geneva, October 25 and 26, 2021****Original:** English
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**ADDENDUM TO
PROGRESS REPORTS ON THE WORK OF THE TECHNICAL WORKING PARTIES INCLUDING THE
WORKING GROUP ON BIOCHEMICAL AND MOLECULAR TECHNIQUES, AND DNA-PROFILING IN
PARTICULAR (BMT)***Document prepared by the Office of the Union**Disclaimer: this document does not represent UPOV policies or guidance*

1. The purpose of this addendum is to present the reports from the chairperson 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), at their sessions in 2021.

2. The structure of this document is as follows:

Annex I Technical Working Party on Automation and Computer Programs (TWC)
Annex II Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT)

[Annex I follows]

ANNEX I

THIRTY-NINTH SESSION OF THE TECHNICAL WORKING PARTY ON AUTOMATION AND COMPUTER PROGRAMS (TWC)

Report by Ms. Beate Rücker (Germany), Chairperson of the TWC

The TWC held its thirty-ninth session, hosted by the United States of America and organized by electronic means, from September 20 to 22, 2021, under the chairmanship of Ms. Beate Rücker (Germany). The report of the session is provided in document TWC/39/9 "Report".

The session was attended by 54 participants from 23 members of the Union and 1 observer State.

The TWC was welcomed by Mr. Jeffery Haynes, Commissioner, Plant Variety Protection Office, AMS, Science & Technology Program, United States Department of Agriculture (USDA).

The TWC considered document TWC/39/5 "Development of software for the improved COYU method (splines)" and received a presentation from an expert from the United Kingdom. The TWC noted the progress on software development for COYU Splines and that evaluation versions of the software had been released in August 2021. The TWC noted that results of the test campaign of the COYU Splines software were expected to be available in 2022 and agreed to invite the expert from the United Kingdom to report developments at the first session of the TWM.

The TWC considered the proposed revision of document TGP/8, Section 9 "The Combined-Over-Years Uniformity Criterion (COYU);" on the basis of the draft presented in the Annexes to document TWP/5/11. The TWC agreed that further consideration would be required on whether to remove guidance on COYU moving average from document TGP/8, Section 9, and replace it by the explanation on the improved method (COYU Splines), on the basis that explanation on COYU moving average was made available on the UPOV website.

The TWC agreed that further discussion would be required on using COYU when a candidate had a level of expression in a characteristic outside that seen in other varieties (extrapolation) and agreed to invite the United Kingdom to make a presentation at the first session of the TWM.

The TWC received a presentation on "Big Data Platform for DUS Examination" from an expert from China. A copy of the presentation is provided in document TWC/39/7.

The TWC received a presentation on "Optical Markers: new technology applied for barley, wheat & soybeans variety recognition" from an expert from Argentina. A copy of the presentation is provided in document TWC/39/8. The TWC noted that Argentina was considering the use of the new technology in DUS examination and agreed to invite the expert from Argentina to report developments at the first session of the TWM.

The TWC received a presentation from an expert from China on statistical analysis software DUSCEL3.0 for management and analysis of data and photos of DUS trials. A copy of the presentation is provided in document TWC/39/6. The TWC noted that the software was still under development. The TWC agreed to invite experts to contact China for cooperation in the further development of the software and agreed to invite China to report developments at the first session of the TWM.

The TWC considered document TWP/5/10. The TWC agreed with the inclusion of the guidance on "Different forms that variety descriptions could take and the relevance of scale levels" in document TGP/8 Part I Section 2 "Data to be recorded" as new Section 2.5. The TWC agreed that members of the Union should be invited to propose the inclusion of software incorporating their methods for converting observations into notes in document UPOV/INF/16 or document UPOV/INF/22, as appropriate, with a reference to the availability of such methods in document TGP/8 Part I, new Section 2.5.

The TWC considered document TWP/5/4 and agreed with amending the UPOV code system to provide information on variety types, groups and denomination classes, as set out in document UPOV/INF/23/1 Draft 2. The TWC agreed with the proposal of the TWA, at its fiftieth session, to consider a limit to the number of characters used in the appended element, to avoid unnecessarily long extensions.

The TWC considered document TWP/5/3 and noted the developments concerning UPOV PRISMA. The TWC noted the comment made by an expert from the United Kingdom on the need to encourage uptake of training and support by the users of UPOV PRISMA.

The TWC considered the possible measures for physical and virtual participation at TWP meetings, as set out in document TWP/5/12, paragraph 26. The TWC agreed with measures (b) “to organize virtual preparatory workshops prior to the TWPs” and (c) “to offer the possibility to provide comments and questions on documents in advance of the meeting.” The TWC considered measures (d) “to organize electronic participation during the TWPs [...]” and (e) “to have virtual meeting sessions for part of the day [...]” and agreed as follows:

- To alternate one year of physical meeting with another of online meeting;
- To have roundtables for introducing participants and break-out sessions to facilitate new participants to establish contacts for international cooperation.

The TWC noted that no invitations for the venue of the first session the TWM had been received. The TWC noted that a decision on the date and place of the first session of TWM would be taken by the Council, at its fifty-fifth session, to be held on October 29, 2021.

The TWC noted that UPOV members could contact the Office of the Union with offers of date and place to host the session of TWM in 2022. If an offer was received sufficiently before the fifty-fifth session of the Council, the offer could be considered by the Council at its fifty-fifth session.

The TWC agreed that the first session of TWM should be held via electronic means, from September 19 to 23, 2022, if no alternative offer was received from a member of the Union.

The TWC agreed to invite the BMT to consider holding the first session of TWM during the week of September 19, 2022, via electronic means.

The TWC agreed that documents for the first session of TWM should be submitted to the Office of the Union by July 21, 2022. The TWC noted that items would be deleted from the agenda if the planned documents did not reach the Office of the Union by the agreed deadline.

The TWC proposed to discuss the following items at the first session of TWM:

1. Opening of the Session
2. Adoption of the agenda
3. Short reports on developments in plant variety protection:
 - (a) Reports from members and observers (written reports to be prepared by members and observers)
 - (b) Report on developments within UPOV (report by the Office of the Union)
4. Tools and methods for DUS examination (documents invited)
 - (a) Comparison of results obtained for COYD and COYU procedures using different software (document to be prepared by France)
 - (b) Development of software for the improved COYU method (splines) (document to be prepared by the United Kingdom)
 - (c) Extrapolation in relation to COYU (document to be prepared by the United Kingdom and documents invited)
5. Phenotyping and image analysis (documents invited)
6. Development of guidance and information materials (documents to be prepared by the Office of the Union)
7. Variety denominations (document to be prepared by the Office of the Union)
8. Exchange and use of software and equipment (document to be prepared by the Office of the Union and documents invited)
 - Development of Statistical Analysis Software: DUSCEL (document to be prepared by China)
9. Information and databases (documents invited)
 - (a) UPOV information databases (document to be prepared by the Office of the Union)
 - (b) Variety description databases (document to be prepared by the Office of the Union and documents invited)
 - (c) UPOV PRISMA (document to be prepared by the Office of the Union)
10. Increasing participation in the work of the TC and the TWPs (document to be prepared by the Office of the Union)

11. Molecular Techniques and bioinformatics (document to be prepared by the Office of the Union and documents invited)
12. Cooperation in examination (document to be prepared by the Office of the Union)
13. Date and place of the next session
14. Future program
15. Adoption of the Report on the session (if time permits)
16. Closing of the session

[Annex II follows]

ANNEX II

TWENTIETH SESSION OF THE WORKING GROUP ON BIOCHEMICAL AND MOLECULAR TECHNIQUES, AND DNA-PROFILING IN PARTICULAR (BMT)

Report by Ms. Beate Rücker (Germany), Chairperson of the BMT

The BMT held its twentieth session, hosted by the United States of America and organized by electronic means, from September 22 to 24, 2021, under the chairmanship of Ms. Beate Rücker (Germany). The report of the session is provided in document BMT/20/12 "Report".

The session was attended by 116 participants from 32 members of the Union, 3 observer States and 7 observer organizations.

The BMT was welcomed by Mr. Jeffery Haynes, Commissioner, Plant Variety Protection Office, AMS, Science & Technology Program, United States Department of Agriculture (USDA) and received a video presentation on Plant Variety Protection in the United States of America.

The BMT adopted the agenda as reproduced in document BMT/20/1 Rev.

The BMT noted the information from France that a training course on the use of molecular techniques in support of DUS examination would be organized by GEVES in March 2022.

The BMT received the following presentations of work on molecular techniques in relation to DUS examination:

- "Update on IMODDUS activities"
- "Identifying levels of diversity and developing markers to assist in managing the DUS reference collection of field beans (*Vicia faba*)"
- "Developing a strategy to apply SNP molecular markers in the framework of winter oilseed rape DUS testing"

The BMT considered documents BMT/20/3 and UPOV/INF/17/2 Draft 5 and agreed with the revision of document UPOV/INF/17/2 on the basis of document UPOV/INF/17/2 Draft 5 and the Annex to document BMT/20/3. The BMT noted the comments provided by ISF in advance of the session in relation to possible improvements to document UPOV/INF/17 regarding certain technical matters. The BMT agreed to invite ISF to make a presentation on these matters at the first session of the TWM.

The BMT noted that the TC, at its fifty-sixth session, had agreed that another joint OECD, UPOV, ISTA workshop on molecular techniques should be organized in the near future. The BMT noted that a poll had been conducted during its twentieth session to assess information from participants on common interest between UPOV, OECD and ISTA on the use of BMT and suitable topics for a joint UPOV/OECD/ISTA workshop. The BMT considered the responses to the poll, as reproduced in Annex II to document BMT/20/12, and agreed to propose the following possible topics for a future joint UPOV/OECD/ISTA workshop:

- providing information on the use of molecular techniques in each organization;
- procedure for approval of biochemical and molecular methods in each organization; and
- possibilities for harmonizing methods between UPOV, OECD and ISTA.

The BMT received a presentation from Ms. Ana Laura Vicario (International Seed Testing Association (ISTA)) on "ISTA report on biochemical and molecular techniques", a copy of which is reproduced in document BMT/20/11. The BMT agreed that it was useful to learn about the progress in ISTA validation methods, as reported in the presentation.

The BMT received a presentation from Mr. Csaba Gaspar (Organisation for Economic Co-operation and Development (OECD)) on "Current status of BMT under the OECD seed Schemes", a copy of which is reproduced in document BMT/20/10. The BMT noted the expression of interest by OECD to continue collaborating with UPOV on matters relating to the use of molecular markers in the organizations and agreed that the joint initiatives should be continued.

The BMT received a presentation on "Confidentiality, ownership and access to molecular data, including model agreement template" from the representative of CropLife International on behalf of the African Seed Trade Association (AFSTA), the Asia and Pacific Seed Association (APSA), the International Community of Breeders of Asexually Reproduced Horticultural Plants (CIOPORA), CropLife International, Euroseeds, the International

Seed Federation (ISF) and the Seed Association of the Americas (SAA). A copy of the presentation is reproduced in document BMT/20/5.

The BMT agreed to invite presentations on current practices on confidentiality and access to molecular data to be made at the first session of the TWM. The BMT agreed that current practices in UPOV members and observers could provide a suitable basis for further discussions on the topic.

The BMT recalled the information provided by participants at the nineteenth session of the BMT on their work on biochemical and molecular techniques and areas for cooperation, as reproduced in the Annex to document BMT/20/6. The BMT held a discussion session to allow participants to exchange information on the topic.

The BMT considered whether UPOV could support harmonization and cooperation between members already using molecular markers in DUS examination or making information or BMT services available to other UPOV members. The BMT agreed that information on the use of molecular markers by crop was important to promote cooperation between UPOV members and agreed to propose that the survey on the use of molecular markers was continued to obtain information from a greater number of UPOV members. The BMT agreed that it would be useful to confirm the reasons for UPOV members not responding to the first survey.

The BMT agreed that the possibility to form discussion groups during the sessions should be maintained.

The BMT noted that no invitations for the venue of the first session the TWM had been received. The BMT noted that a decision on the date and place of the first session of TWM would be taken by the Council, at its fifty-fifth session, to be held on October 29, 2021.

The BMT noted that UPOV members could contact the Office of the Union with offers of date and place to host the session of TWM in 2022. If an offer was received sufficiently before the fifty-fifth session of the Council, the offer could be considered by the Council at its fifty-fifth session.

The BMT considered the proposal by the TWC and agreed to hold the first session of TWM via electronic means from September 19 to 23, 2022, if no alternative offer was received from a member of the Union.

The BMT agreed that documents for the first session of TWM should be submitted to the Office of the Union by July 21, 2022. The BMT noted that items would be deleted from the agenda if the planned documents did not reach the Office of the Union by the agreed deadline.

The BMT proposed to discuss the following items at the first session of TWM:

1. Opening of the session
2. Adoption of the agenda
3. Reports on developments in UPOV concerning biochemical and molecular techniques (document to be prepared by the Office of the Union)
4. Short presentations on new developments in biochemical and molecular techniques by DUS experts, biochemical and molecular specialists, plant breeders and relevant international organizations (reports by participants)
5. Report of work on molecular techniques in relation to DUS examination (papers invited)
6. Variety description databases including databases containing molecular data (papers invited)
7. Methods for analysis of molecular data, management of databases and exchange of data and material (papers invited)
8. The use of molecular techniques in examining essential derivation¹ (papers invited)
9. The use of molecular techniques in variety identification¹ (papers invited)
10. The use of molecular techniques for enforcement¹ (papers invited)
11. Cooperation between international organizations (document to be prepared by the Office of the Union and papers invited)

¹ Breeders' Day

12. Confidentiality, ownership and access to molecular data, including model agreement template¹ (papers invited)
13. Session to facilitate cooperation (possible break-out sessions)
14. Date and place of next session
15. Future program
16. Report of the session (if time permits)
17. Closing of the session

[End of Annex II and of document]