

Technical Working Party for Vegetables

Fifty-Fourth Session

Brasilia, Brazil, May 11 to 15, 2020

TWP/4/9**Original:** English**Date:** April 14, 2020**Technical Working Party for Ornamental Plants and Forest Trees**

Fifty-Second Session

Roelofarendsveen, Netherlands, June 8 to 12, 2020

Technical Working Party for Agricultural Crops

Forty-Ninth Session

Saskatoon, Canada, June 22 to 26, 2020

Technical Working Party for Fruit Crops

Fifty-First Session

Nîmes, France, July 6 to 10, 2020

Technical Working Party on Automation and Computer Programs

Thirty-Eighth Session

Alexandria, United States of America, September 21 to 23, 2020

INTERNATIONAL COOPERATION IN EXAMINATION*Document prepared by the Office of the Union**Disclaimer: this document does not represent UPOV policies or guidance***EXECUTIVE SUMMARY**

1. The purpose of this document is to report on discussions on possibilities to facilitate cooperation in DUS examination.
2. The TWPs are invited to note:
 - (a) that the TC, at its fifty-fifth session, considered the outcomes of discussions held at the TWPs and the proposals to address the concerns raised, as set out in Annex II to this document;
 - (b) the synthesis of concerns and proposals by the TWPs, as set out in paragraph 19 of this document;
 - (c) that the TC agreed to invite the Office of the Union to develop a coherent plan to address the concerns raised by the TWPs and to propose how to assess the impact of the plan, based on the proposals set out in paragraph 20 of this document; and
 - (d) that the TC agreed that TWP sessions should be used to develop cooperation among members to a greater extent.

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
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
TWPs:	Technical Working Parties

BACKGROUND

5. At its fifty-second session, held in Geneva, from March 14 to 16, 2016, the Technical Committee (TC), as a result of the discussion under agenda item 3 “Discussion on quality parameters for DUS examination”, noted that there may be obstacles to cooperation in examination, including exchange of DUS reports, and agreed to explore the situation further. As a starting point for discussion, the TC agreed that it would be useful for the Office of the Union to conduct a survey of the current situation of members of the Union and to report the results to the TC at its fifty-third session (see document TC/52/29 Rev. “Revised Report”, paragraph 207).

6. Developments prior to 2019 are presented in document TWP/3/14 “Cooperation in Examination”.

Identification of contact persons for international cooperation in DUS examination

7. The TC, at its fifty-fourth session, held in Geneva from October 29 to 30, 2018, agreed that it would be useful for UPOV members to identify the contact persons for international cooperation in DUS examination and make this information available via the UPOV website (see document TC/54/31 “Report”, paragraph 254).

8. On March 21, 2019, the Office of the Union issued Circular E-19/012 “Invitation to identify the contact persons for international cooperation in DUS examination” to Council representatives and alternate representatives.

9. In response to the Circular E-19/012, the following 34 members of the Union provided information on the person(s) to be contacted for matters concerning international cooperation in DUS examination:

African Intellectual Property Organization (OAPI)	Netherlands
Brazil	New Zealand
Canada	Poland
Chile	Republic of Korea
China	Republic of Moldova
Costa Rica	Russian Federation
Croatia	Serbia
Denmark	Slovakia
Estonia	Slovenia
European Union	South Africa
Georgia	Sweden

Hungary	Spain
Israel	Trinidad and Tobago
Japan	Tunisia
Latvia	United Kingdom
Lithuania	Uruguay
Mexico	Viet Nam

10. The TC, at its fifty-fifth session, held in Geneva on October 28 and 29, 2019, considered documents TC/55/10 and TC/55/10 Add “International Cooperation in Examination” and noted the contact details provided by the members of the Union concerned, which are presented in Annex I to this document (see document TC/55/25 “Report”, paragraphs 197 to 199).

11. The information on the person(s) to be contacted for matters concerning international cooperation in DUS examination, as presented in Annex I to this document, is provided on the following page of the UPOV website: https://www.upov.int/databases/en/contact_cooperation.html.

12. UPOV members will be invited to update information on the person(s) to be contacted for matters concerning international cooperation in DUS examination every year when invited to provide information for document TC/[xx]/4 “List of genera and species for which authorities have practical experience in the examination of distinctness, uniformity and stability.”

13. *The TWPs are invited to note:*

(a) *the list of persons to be contacted for matters concerning international cooperation in DUS examination, provided in Annex I to this document and on the UPOV website; and*

(b) *that UPOV members will be invited to update information on a person(s) to be contacted for matters concerning international cooperation in DUS examination every year when invited to provide information for document TC/[xx]/4 “List of genera and species for which authorities have practical experience in the examination of distinctness, uniformity and stability”.*

Proposals to overcome technical concerns in relation to cooperation

Background

14. The TC, at its fifty-fourth session, agreed to invite the TWPs to explore the technical concerns that prevented cooperation and to propose how to overcome the technical concerns raised (see document TC/54/31 “Report”, paragraph 255).

Consideration by the Technical Working Parties

15. At their sessions in 2019, the TWO, TWV, TWF, TWA and TWC considered document TWP/3/14 “Cooperation in Examination” (see documents TWO/51/12 “Report”, paragraphs 60 and 61, TWV/53/14 “Report”, paragraph 72, TWF/50/13 “Report”, paragraph 82, TWA/48/9 “Report”, paragraphs 76 to 86, and TWC/37/12 “Report”, paragraphs 94 to 100).

16. The TWPs, at their sessions in 2019, were invited to form discussion groups at each TWP to discuss the technical concerns that prevent cooperation in DUS examination and propose how to overcome the technical concerns raised. The outcomes of those discussions at each TWP are reproduced in Annex II to this document.

Consideration by the Technical Committee

17. The TC, at its fifty-fifth session, noted that the TWPs, at their sessions in 2019, had formed discussion groups to discuss the technical concerns that prevent cooperation in DUS examination and to propose how to overcome the technical concerns raised (see document TC/55/25 "Report", paragraphs 201 to 205).

18. The TC considered the outcomes of discussions held at the TWPs and the proposals to address the concerns raised, as set out in Annex II to this document.

19. To facilitate analysis by the TC and consideration of how to overcome concerns raised, the concerns and proposals by the TWPs were synthesized as follows:

Concerns

Technical and related administrative issues:

- Sufficient experience for conducting DUS examination of a particular crop / quality of examination performed
- Suitable variety collection
- Information on varieties included in DUS examination
- Different descriptions due to environmental influence on expression of characteristics
- Lack of assessment of or divergent protocols and nomenclature for disease resistance characteristics
- Requirement for a specific comparison variety to be described along with candidate
- Lack of information on quality controls for DUS at breeders' premises
- DUS test reports that do not conform to UPOV Test Guidelines (missing or different characteristics)
- Difficulty to complete variety collections (e.g. import / phytosanitary issues)
- Lack of global DNA database for selection of similar varieties
- Language barriers
- Difficulty to identify contact persons
- Lack of information on available DUS test reports

Policy or legal issues:

- Requirement of formal agreement for cooperation
- Obligation for DUS examination to be conducted by the authority granting the rights
- Non-acceptance of breeder-based DUS test reports
- Wish from breeders to use (or not) existing DUS reports

Proposed solutions

- GENIE Database: practical experience and cooperation in examination;
- Publication of contact persons for DUS cooperation on UPOV website (see paragraphs 6 to 11)
- PLUTO Database: create search function to find DUS test reports
- Multilingual online tool for requesting DUS test reports
- TWP sessions: invite presentations on DUS testing procedures
- Amend document TGP/5 Section 6 to report the varieties considered in the examination (not only similar varieties);
- Amend document TGP/5 Section 6 to provide data from field observations along with DUS test report for each variety
- Translate the Model Agreement for Cooperation in Testing Varieties into other relevant languages (doc. TGP/5 Sec.1)
- Develop common database with morphological and molecular information for selected crops/species
- Publishing quality assurance procedures for variety testing
- Survey and review of UPOV members use of UPOV Test Guidelines

20. The TC agreed to invite the UPOV Office to develop a coherent plan, based on the following proposals, to address the concerns raised by the TWPs and to propose how to assess the impact of the plan:

- GENIE Database: practical experience and cooperation in examination;
- Publication of contact persons for DUS cooperation on UPOV website (see paragraphs 6 to 11)
- PLUTO Database: create search function to find DUS test reports
- Multilingual online tool for requesting DUS test reports
- TWP sessions: invite presentations on DUS testing procedures
- Amend document TGP/5 Section 6 to report the varieties considered in the examination (not only similar varieties);
- Amend document TGP/5 Section 6 to provide data from field observations along with DUS test report for each variety
- Translate the Model Agreement for Cooperation in Testing Varieties into other relevant languages (doc. TGP/5 Sec.1)
- Develop common database with morphological and molecular information for selected crops/species
- Publishing quality assurance procedures for variety testing
- Survey and review of UPOV members use of UPOV Test Guidelines

21. The TC agreed to report to the CAJ the related policy or legal issues presented in paragraph 20.

22. The TC noted that TWP sessions could provide an opportunity for experts to enhance collaboration and exchange of information and agreed that TWP sessions should be used to develop cooperation among members to a greater extent.

23. The Office of the Union will prepare a coherent plan for consideration by the TC, at its fifty-sixth session, based on the proposals in paragraph 20, to address the concerns raised by the TWPs and to propose how to assess the impact of the plan

24. *The TWPs are invited to note:*

(a) that the TC, at its fifty-fifth session, considered the outcomes of discussions held at the TWPs and the proposals to address the concerns raised, as set out in Annex II to this document;

(b) the synthesis of concerns and proposals by the TWPs, as set out in paragraph 19 of this document;

(c) that the Office of the Union will prepare a coherent plan for consideration by the TC, at its fifty-sixth session, based on the proposals in paragraph 20, to address the concerns raised by the TWPs and to propose how to assess the impact of the plan; and

(d) that the TC agreed that TWP sessions should be used to develop cooperation among members to a greater extent.

[Annex follows]

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TECHNICAL CONCERNS THAT PREVENT COOPERATION IN DUS EXAMINATION
AND PROPOSALS ON HOW THEY COULD BE OVERCOME

The TWO noted the following technical concerns raised by participants in the discussion groups:

- Level of experience of an authority to conduct DUS examination for a particular crop;
- Whether the testing authority has an appropriate set of example varieties;
- Whether relevant varieties have been considered in the examination;
- Environmental influence over the expression of relevant characteristics (e.g. color of plant parts);
- Need for information on quality controls on reports produced from trials grown on breeders' premises;
- DUS test reports that do not conform to UPOV Test Guidelines;
- Difficulties to import plant material for DUS examination (e.g. for centralized testing of particular crops);
- Additional requirement for a comparison variety to be described along with the candidate

The TWO noted the following proposals from the participants in the discussion groups on how to overcome the technical concerns raised:

- To provide information on varieties available in the variety collection;
- To report which varieties were considered in the examination (not only the most similar variety chosen to be grown in the trial);
- Possible use of verification trials with additional relevant varieties (e.g. local varieties) and/or to confirm environmental influence on expression of relevant characteristics;
- To provide data from characteristics assessed during trials (field observations);
- To disclose procedures used for DUS testing by different authorities;
- To conduct ring-tests for mutual understanding on possible observation discrepancies between different authorities;
- To maintain updated information available on cooperation in the GENIE database;
- To facilitate access to morphological databases from different authorities (possible role of UPOV to facilitate such access);
- To facilitate requesting variety information;
- To share information at TWPs to improve discussion about requirements and possibilities for cooperation;
- To develop an online portal to facilitate requesting DUS test reports;
- To provide information on contact person for cooperation in DUS examination;
- To promote participation at TWP sessions as an opportunity to facilitate cooperation and enhance communication between authorities

The TWV noted the following technical concerns raised by participants in the discussion groups:

- Appropriate reference collection/ set of example varieties
- Difficulties to obtain plant material to complete the local reference collection (phytosanitary measures)
- Difficulties to deal with differences in climatic/ geographical conditions
- Differences in national Test Guidelines (e.g. missing questions, more/less characteristics)
- Obligation for some species to have DUS test carried out in the territory of the country (legal & technical)
- Regulations in place in the country
- No assessment of disease resistance characteristics in some DUS reports
- Divergence on how to observe a characteristic (e.g. different protocols for disease resistance characteristic)
- Validation process required to ensure the level of the quality of the DUS examination performed
- Lack of information on crops/ DUS tests available
- Formal agreement required
- Some authorities do not accept reports under certain conditions (e.g. DUS at breeder's premises)
- Discrepancies in disease names and nomenclature
- Differences in the variety descriptions
- Lack of global database (DNA)

- Additional work to create a common database on phenotypical data
- Level of experience and expertise of DUS examination office for some crops or some characteristics
- Languages

The TWV noted the following proposals from the participants in the discussion groups on how to overcome the technical concerns raised:

- Encourage the same base for performing DUS examination with the use of UPOV Test Guidelines
- Increase the number of characteristics in Test Guidelines to trigger better harmonization between DUS examination Offices
- Identify a contact person for questions in relation to DUS in each authority
- Intensify training and support among UPOV members (for DUS purposes)
- Encourage the use of internationally agreed terminology for disease
- Assess the possibility to develop a common database (with description and molecular information) to be able to choose similar varieties
- Create a centralized source of information on DUS examination
- Breeders to encourage changes in legal rules to trigger better cooperation among authorities
- Encourage participation in UPOV sessions (e.g. TWPs) to create a better network of experts and facilitate training and exchange of information
- Make available statistics on current exchange of DUS reports with details on crops and countries
- Facilitate establishment of Memorandum of Understanding (MOU) at the technical level (cooperation agreement)
- Encourage exchange of DUS staff/ experts
- More engagement of the countries in order to be in line with existing Test Guidelines
- Transparency regarding the conditions of the DUS examination (e.g. number of varieties in the reference collection)

The TWF noted the following technical concerns raised by participants in the discussion groups:

- Difficulty to exchange plant material between some countries (e.g. phytosanitary measures)
- Different environmental conditions (need to be similar to take over reports)
- No taking-over of tests in the case of breeder -testing
- Need to establish agreement (bilateral agreements or case by case agreements)
- International understanding of varieties of common knowledge
- Easier to establish cooperation for major species, more difficult for minor species
- Language barriers
- Identification of contact persons
- National Test Guidelines – lack of harmonization if no UPOV Test Guidelines
- Reference varieties (different national rules on which ones are used)
- Regulations in place in the country to perform all DUS examinations
- Wish from breeders to use (or not) existing DUS reports
- Appropriate reference collection/ set of example varieties

The TWF noted the following proposals from the participants in the discussion groups on how to overcome the technical concerns raised:

- Ensure the quality of the report produced
- Facilitated administrative process for obtaining test reports
- Encourage participation in UPOV sessions (e.g. TWPs)
- Improve communication between countries (contact persons, specialist meetings, ring tests)
- Wider access to information (e.g. provide more technical information in GENIE, displayed in a more user-friendly manner)
- Enhance transparency in contact lists (include crop experts)
- Create model/ template for standard cooperation agreement in relevant different languages (available on the UPOV Website)
- Encourage the use of TGs to guarantee harmonization (differences between authorities)
- Ensure follow-up in any DUS reports request

The TWA noted the following technical concerns raised by participants in the discussion groups:

- Regional specificity of agricultural crop varieties would not require expanding cooperation
- Genotype by environment interaction could require additional trials to generate local variety descriptions (regional adaptation of varieties)
- Lack of varieties in variety collection (varieties of local importance)
- Lack of information on similar varieties included in trial or compared against candidate (information not available on examination report)
- Lack of more detailed information on location and environment of testing
- Impossibility to observe some characteristics due to environmental conditions leading to incomplete descriptions
- Lack of experience on testing of a particular crop
- Different methods of testing (e.g. use of TGs used other than UPOV TGs, organization of trials, analysis criteria)
- Lack of harmonized TGs for minor crops
- Lack of availability of DUS test reports in required languages
- Lack of response from examination offices contacted for cooperation
- Differences in criteria for granting variety denomination
- Difficulty to transfer material for testing (phytosanitary issues)
- Lack of UPOV members in certain regions (sub-regional cooperation)
- Legal restrictions to cooperate, such as priority partners
- Difficulty to organize receiving payments from foreign applicants
- Lack of capacity to invoice the sale of test reports
- Difficulty by some companies or UPOV members to pay DUS testing fees

The TWA noted the following proposals from the participants in the discussion groups on how to overcome the technical concerns raised:

- Centralized testing of varieties for crops with larger regional adaptation
- Regional collaboration among PVP offices, such as conferences to strengthen technical contacts and training for calibration and harmonization
- Inform the composition of variety collections
- Establishment of quality assurance systems
- Frequent update of example varieties in UPOV TGs or creating regional sets of example varieties
- Harmonization of molecular markers and development of global databases
- Increase capacity of UPOV PRISMA to translate applications and other data to be exchanged
- Provide a platform to request DUS test reports (mediating service, including translation)
- Supporting small companies to purchase test reports

The TWC noted the following technical concerns raised by participants in the discussion groups:

- Different composition and size of collection of varieties
- Different protocols for molecular markers
- Different criteria for assessing distinctness
- Different national test guidelines
- Language barriers
- Phytosanitary requirements
- Difficulties in administrative procedures

The TWC noted the following proposals from the participants in the discussion groups on how to overcome the technical concerns raised:

- Development of the general structure of databases
- Guidelines for developing databases
- Validated data of SNP profiles of varieties in different crops
- Development of harmonization platform of SNPs set and software
- Information sharing on machinery and equipment for DUS testing

Electronic means

- Harmonized platform in XML
- Crop dataset in the cloud
- Joined construction and use of electronic means
- Variety DNA passport for identification/ enforcement

[End of Annex II and of document]