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| International Union for the Protection of New Varieties of Plants |  |

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| Technical Working Party for Ornamental Plants and Forest TreesFifty-Seventh SessionRoelofarendsveen, Kingdom of the Netherlands, March 31 to April 3, 2025Technical Working Party on Testing Methods and TechniquesThird SessionBeijing, China, April 28 to May 1, 2025Technical Working Party for VegetablesFifty-Ninth SessionVirtual meeting, May 5 to 8, 2025Technical Working Party for Agricultural CropsFifty-Fourth SessionArusha, United Republic of Tanzania, May 19 to 22, 2025Technical Working Party for Fruit CropsFifty-Sixth SessionBursa, Türkiye, June 23 to 26, 2025 | TWP/9/3Original: EnglishDate: March 24, 2025 |

test guidelines: support for drafters; additional characteristics; AND METHODS OF PROPAGATING THE VARIETY

Document prepared by the Office of the Union

Disclaimer: this document does not represent UPOV policies or guidance

Executive SUMMARY

 The purpose of this document is to report on developments concerning Test Guidelines. The document is divided in three parts: (I) Support for drafters; (II) Additional characteristics; and (III) Methods of propagating the variety in Technical Questionnaires.

(I) Support for drafters and the Technical Committee sub-group on Test Guidelines

 The first part of this document provides information on the consultation to be conducted at the Technical Working Parties (TWPs) on options for improving the Test Guidelines structure, the tool for drafting Test Guidelines and the creation of national test guidelines. In 2023, the Technical Committee (TC) agreed to establish a sub-group to discuss these matters (see terms of reference in document [TC/59/28,](https://www.upov.int/edocs/mdocs/upov/en/tc_59/tc_59_28.pdf) paragraph 61).

 The TWPs will be invited to consider options for improving the Test Guidelines structure, the tool for drafting Test Guidelines and the creation of national test guidelines, as set out in Annex II to this document.

(II) Additional Characteristics and States of Expression

 The second part of this document presents one additional characteristic to the Test Guidelines for Pea (document TG/7/10) notified to the Office of the Union by the European Union: “Resistance to *Peronospora viciae* (Pv)” (downy mildew). This information will be presented to the Technical Working Party for Vegetables (TWV) to consider whether to initiate a partial revision of the Test Guidelines for Pea, or to post the additional characteristic on the UPOV website.

 The characteristics included in UPOV Test Guidelines are not exhaustive and may be expanded with additional characteristics if that proves useful and the characteristics meet the conditions set out in UPOV guidance. Characteristic in individual authorities’ test guidelines may also need to be changed over time, e.g. to create new states of expression arising from breeding developments. To retain internationally harmonized variety descriptions, document TGP/5, Section 10 ‘Notification of Additional Characteristics’ provides a basis for such differences between the Test Guidelines and individual authorities’ test guidelines to be notified to all members of the Union.

(III) Technical Questionnaire, section 4.2: “Method of propagating the variety”

 Members of the Union receiving online applications through UPOV PRISMA require information on “method of propagating the variety” to be provided with structured data and harmonized language. UPOV Test Guidelines adopted before 2007 did not provide such data structure and language in Technical Questionnaires. In this regard, lists with options of structured data and harmonized language on the method of propagating the variety will be made available in UPOV PRISMA for 47 crops, as provided in Annex IV to this document. This information could be relevant in the case of future revision of those Test Guidelines.

 The TWA, TWF, TWO and TWV will be invited to consider the options for information on method of propagating the variety to be provided in the Technical Questionnaires of 47 crops and whether to propose the partial revision of their Test Guidelines for including this information.

 The structure of this document is as follows:

[Executive SUMMARY 1](#_Toc193288250)

[Measures to improve support for drafters of test guidelines 2](#_Toc193288251)

[Measures on Test Guidelines (TGs) and online tool for drafting TGs 2](#_Toc193288252)

[Subgroup on Test Guidelines 2](#_Toc193288253)

[List of members willing to provide mentoring on drafting national test guidelines 3](#_Toc193288254)

[Training and distance learning 3](#_Toc193288255)

[Updating distance learning courses 3](#_Toc193288256)

[Developing new courses 3](#_Toc193288257)

[Promoting training opportunities 3](#_Toc193288258)

[Notification of Additional Characteristics and States of Expression 4](#_Toc193288259)

[Notification and decision procedure 4](#_Toc193288260)

[Additional characteristics and states of expression notified 4](#_Toc193288261)

[Test Guidelines for Pea (document TG/7/10): Resistance to Downy Mildew (Pv) 4](#_Toc193288262)

[technical Questionnaire, section 4.2: “Method of propagating the variety” 5](#_Toc193288263)

ANNEX I 2024 Summary of outcomes of the consultation on UPOV Test Guidelines

ANNEX II TC Subgroup on Test Guidelines: 2025 Consultation of Technical Working Parties

ANNEX III Test Guidelines for Pea: Additional characteristic: Resistance to *Perenospora viciae* (Pv)

ANNEX IV Technical Questionnaire, Section 4.2: “Method of propagating the variety”

 The following abbreviations are used in this document:

TC: Technical Committee

TC-EDC: Enlarged Editorial Committee

TWA: Technical Working Party for Agricultural Crops

TWF: Technical Working Party for Fruit Crops

TWM: Technical Working Party on Testing Methods and Techniques

TWO: Technical Working Party for Ornamental Plants and Forest Trees

TWPs: Technical Working Parties

TWV: Technical Working Party for Vegetables

Measures to improve support for drafters of test guidelines

Measures on Test Guidelines (TGs) and online tool for drafting TGs

### Subgroup on Test Guidelines

#### Developments in 2024

 The TC, at its sixtieth session[[1]](#footnote-2), considered the report from the subgroup on Test Guidelines and agreed on the importance of the work of leading experts in charge of drafting Test Guidelines (see Annex I to this document).

 The TC considered possible options to improve the online tool for drafting Test Guidelines and noted the report from the Office of the Union on issues identified by the subgroup currently being addressed, including a new reporting tool and improved functionalities to upload tables and images. The TC noted the plan to test using the online drafting tool during TWPs to record the outcome of discussions on draft Test Guidelines during the sessions.

 The TC considered possible options to improve the Test Guidelines structure and agreed to invite the leading expert to continue developing the proposals, to be presented to the TWPs at their sessions in 2025, along with the outcomes of the consultations.

#### 2025 Consultation of Technical Working Parties

 Annex II to this document provides information on the consultation to be conducted at the Technical Working Parties, at their sessions in 2025, on options for improving the Test Guidelines structure, the tool for drafting Test Guidelines and the creation of national test guidelines.

 *The TWPs are invited to consider the proposals for discussion on options for improving the Test Guidelines structure, the tool for drafting Test Guidelines and the creation of national test guidelines, as set out in Annex II to this document.*

List of members willing to provide mentoring on drafting national test guidelines

 The TC, at its sixtieth session, agreed to invite the contact persons of members of the Union to the TC to provide information on their willingness to provide mentoring on drafting national test guidelines for inclusion on the web page of contact persons for international cooperation in DUS examination.

 On January 27, 2025, the Office of the Union issued Circular E-25/003 to all UPOV bodies inviting information on contact persons for drafting test guidelines (mentoring). Information received will be displayed on the UPOV website, along with information on contact persons for [international cooperation](https://www.upov.int/databases/en/contact_cooperation.html) in variety examination.

Training and distance learning

*Updating distance learning courses*

 The TC, at its sixtieth session agreed to invite UPOV members to explore cooperation possibilities with the Office of the Union to resource the updating of the content and format of the UPOV distance learning courses.

*Developing new courses*

 The TC agreed to support the development of new training courses on DUS examination by UPOV members, including developing national test guidelines in the absence of UPOV Test Guidelines and filing applications. The TC noted that content formats such as webinars and video-recordings could be used to provide practical guidance from UPOV members’ experience and complement distance learning courses.

 The TC encouraged UPOV members to contact the Office of the Union to explore the inclusion of training programs provided by UPOV members in the UPOV PVP Certificate program.

*Promoting training opportunities*

 The TC noted that the Office of the Union would organize a [webinar](https://www.upov.int/meetings/en/webinar_videos.html) for leading experts in December 2024 to address frequently asked questions and common challenges using the Test Guidelines drafting tool. The TC noted that the webinar would be open to all members and the video recording made available on the UPOV website and [YouTube channel](https://www.youtube.com/%40upov/videos).

 The TC agreed to support UPOV members promoting training opportunities, including their inclusion in the UPOV PVP Certificate program.

 *The TWPs are invited to note:*

1. *the request for UPOV members to contact the Office of the Union to explore cooperation possibilities to resource the updating of the content and format of the UPOV distance learning courses.*

 *(b) that new training opportunities provided by UPOV members could be included in the UPOV PVP Certificate program;*

 *(c) that information on members willing to provide mentoring on drafting national test guidelines would be included on the web page of contact persons for international cooperation in DUS examination; and*

 *(d) that the video recordings of webinars for drafters of test guidelines are available on the UPOV website and YouTube channel.*

# Notification of Additional Characteristics and States of Expression

Background:

 At its sixtieth session[[2]](#footnote-3), the Technical Committee (TC) noted that no additional states of expression or characteristics had been notified to the Office of the Union since the fifty‑ninth session[[3]](#footnote-4) of the TC and agreed to request this information in future requests to the contact persons of members of the Union to the TC. The TC agreed that the procedure of notification of additional characteristics and states of expression should be further discussed at the Technical Working Parties (TWPs).

### Notification and decision procedure

 Document [TGP/5, Section 10](https://www.upov.int/edocs/tgpdocs/en/tgp_5_section_10.pdf) “Notification of Additional Characteristics and States of Expression” states that “proposals for additional characteristics and states of expression notified to the Office of the Union by means of document TGP/5 Section 10, will be presented to the relevant Technical Working Party(ies) (TWP(s)) at the earliest opportunity with information on the extent of use of the characteristic. The characteristics will then, as appropriate, be posted on the TG Drafters’ webpage of the UPOV website (<https://www.upov.int/resource/en/tg_drafters.html>) on the basis of comments made by the relevant TWP(s), and/or the TWP(s) may initiate a revision or a partial revision of the Test Guidelines concerned.”

Additional characteristics and states of expression notified

### Test Guidelines for Pea (document TG/7/10): Resistance to Downy Mildew (Pv)

 The Office of the Union received the notification from the European Union of an additional characteristic for the Test Guidelines for Pea, document TG/7/10 (see Annex I to this document).

* Resistance to *Peronospora viciae* (Pv) (downy mildew)

 The additional characteristic will be presented to the TWV, at its fifty-ninth session, for consideration on whether it should be posted on the “[Additional Characteristics](https://www.upov.int/resource/en/index_additional_characteristics)” page of the UPOV website and/or whether to initiate a partial revision of the Test Guidelines.

 The TWV is invited to:

1. note the additional characteristic notified on the Test Guidelines for Pea (document TG/7/10), as set out in Annex III to this document;
2. consider whether the additional characteristic should be posted on the Additional Characteristics page of the UPOV website; and
3. consider whether to initiate a partial revision of the Test Guidelines for Pea for including the additional characteristic notified.

technical Questionnaire, section 4.2: “Method of propagating the variety”

 Members of the Union using UPOV PRISMA require structured data/harmonized language to be used when providing information on method of propagating the variety in online applications.

 The TC, at its sixtieth session[[4]](#footnote-5) noted that lists with options for information on method of propagating the variety would be made available in UPOV PRISMA for the Technical Questionnaires of certain Test Guidelines that were adopted before the adoption of document TGP/7 “Development of Test Guidelines” in 2007. Lists with options for structured data and harmonized language on method of propagating the variety (TQ 4.2) will be made available in UPOV PRISMA, as provided in Annex IV to this document, for the following Test Guidelines:

|  |  |
| --- | --- |
| TG/4 | Ryegrass |
| TG/6 | Lucerne |
| TG/7 | Pea |
| TG/10 | Euphorbia fulgens |
| TG/21 | Poplar |
| TG/38 | White Clover |
| TG/39 | Tall Fescue |
| TG/47 | Streptocarpus |
| TG/62 | Rhubarb |
| TG/66 | Lupins |
| TG/67 | Red Fescue |
| TG/69 | Forsythia |
| TG/79 | White Cedar |
| TG/87 | Narcissi (including Daffodils) |
| TG/91 | Crown of Thorns |
| TG/103 | Juniper |
| TG/104 | Melon |
| TG/112 | Mango |
| TG/113 | Easter Cactus |
| TG/114 | Exacum |
| TG/115 | Tulip |
| TG/119 | Squash |
| TG/126 | Lachenalia |
| TG/127 | Leucadendron |
| TG/128 | Leucospermum |
| TG/129 | Protea |
| TG/131 | Chincherinchee |
| TG/132 | Dieffenbachia |
| TG/135 | Spathiphyllum |
| TG/141 | Aster |
| TG/144 | Evening Primrose |
| TG/147 | Pyracantha, Firethorn |
| TG/156 | Firelily |
| TG/165 | Dill |
| TG/167 | Okra |
| TG/174 | Iris (bulbous) |
| TG/178 | Fodder Radish |
| TG/179 | White Mustard |
| TG/180 | Rescue Grass |
| TG/214 | Catharanthus |
| TG/227 | Hop |
| TG/228 | Medics |
| TG/248 | Common Millet |
| TG/249 | Coffee |
| TG/282 | Shiitake |
| TG/291 | Oyster Mushroom |
| TG/216 | *Hypericum hircinum* L., *H. androsaemum* L., *H.* x *inodorum* Mill. |

 The TC agreed to invite the TWA, TWF, TWO and TWV, at their sessions in 2025, to consider:

i) the options for information on method of propagating the variety to be provided in Technical Questionnaires; and

ii) whether to propose the partial revision of the Test Guidelines for including information on method of propagating the variety in Section 4.2 of the Technical Questionnaires.

*The TWA, TWF, TWO and TWV are invited to:*

 *a) note that lists with options for information on method of propagating the variety will be made available in UPOV PRISMA for the Technical Questionnaires of certain Test Guidelines that were adopted before the adoption of document TGP/7 in 2007, as provided in Annex IV to this document;*

 *b) consider the options for information on method of propagating the variety to be provided in Technical Questionnaires; and*

 *c) consider whether to propose the partial revision of the Test Guidelines for including information on method of propagating the variety in Section 4.2 of the Technical Questionnaires.*

[Annex I follows]

2024 SUMMARY OF OUTCOMES OF THE CONSULTATION ON UPOV TEST GUIDELINES

The following sections reproduces the report from the leading expert, Ms. Margaret Wallace (United Kingdom) provided to the Technical Committee at its sixtieth session (Geneva, October 2024).

Test Guidelines – format and content

The subgroup agreed that Test Guidelines (TG) are important for the harmonization of DUS testing. The majority uses the UPOV TG as a basis for their own National Protocol. In these cases, the UPOV document was not consulted after the production of the National document.

Some examiners use the full TG to set up the trial, while most only consult the table of characteristics and the associated explanations – the rest of the document is retained for reference should the need arise.

Some considered the information in sections one to seven of the TG unnecessary; some expressed that it was important to retain it. In general, the group considered that the information could be displayed in a simpler way to make the details easier to access.

The majority would also like to review what is contained in those sections and consider if there is a better way of presenting the information that is standard.

* For example, could information pertaining to all crops of a specific type be included in reference document e.g. refer to document for cross pollinated species instead of in the individual TGs.

The subgroup was divided in the requirements for the format of the document – even within the representatives from the same UPOV member:

* Some examiners take a printed paper copy to the test site (field, glasshouse, etc).
* Some examiners refer to the document on electronic devices. e.g. mobile phones, tablets, or laptops.

Everyone agreed that it would be useful to have the explanation of a characteristic more easily accessible – currently switching between sections is a pain point for paper and electronic users.

The opportunity for the use of videos or interactive images in the explanations was noted. This could result in better harmonization (and provide training for examiners) on the method of observation for specific characteristics. This was considered most useful for intricate characteristics where the part of the plant was not immediately obvious or the method particularly specific. However, it was noted that this could put an extra burden on the drafters so might restrict the participation of experts in the process.

It was highlighted that the table of characteristics does not need to contain all of the UPOV languages. This could free up space for the explanations.

The group generally felt that the Technical Questionnaire (TQ) could be separated from the TG. This would allow the revision of at TQ without a revision of the TG. The TQ should always be revised when a TG revision occurs.

Some people felt that there needs to be an easy way to update the TG to reflect changes in taxonomy.

The TG should include a link to the UPOV website where users can find the list of additional characteristics. This would provide easy access without confusing the status of such characteristics.

Example varieties were considered to be useful, but the difficulty in accessing material, and problems with expression in different environments were highlighted. There were no proposed solutions, but it is a topic that may warrant future consideration in addition to the current revision of Guidance Note 28.

It was wholly agreed that the format should facilitate automatic translation to allow easier access for the many members who work in languages other than English, French, German, or Spanish.

TG Template Drafting Tool

Some members of the Sub-Group had not used the drafting tool. Many agreed that the current drafting tool was a great improvement on the previous method of drafting in Word documents, however there were some opportunities for improvement.

The current template relies heavily on input from the UPOV Office. The group expressed particular appreciation for Romy Oertel, who is the main point of contact for issue resolution.

The pain points for the current template are the uploading of images, illustrations and diagrams, which are difficult to format and size correctly.

The Group requested that the template be more aligned with the finished document to be able to see changes in real time without the reliance on the preview function.

An easier chat function would be helpful for communication between experts. Notifications were highlighted as an additional tool, ideally with an option to mute them!

Contact details for named interested experts should be easily available, preferably in a contact list for easier communication by email e.g. to arrange online drafting sessions. Displaying the time zone of the experts would also be helpful when arranging discussions.

A better way of tracking changes during the UPOV TWP sessions would be helpful. If the drafting tool was used during the discussion to record directly into the drafting tool, it would save duplication of effort.

A tracking system should be visible to show the stages of the drafting process more clearly, so that people new to the discussion can see at a glance where the document is in the development.

Easy translation functions would be helpful to allow experts from all members to engage in the drafting process.

The drafting of national test guidelines was considered to be a good idea by many, if funding allows.

Conclusions

Things that should be considered for future test guidelines:

1. Formatted in such a way:
	1. to allow automatic translation
	2. easier access to details
	3. to allow the inclusion of information related to molecular techniques
2. Separate the TQ from the TG
3. Drafting tool should:
	1. Be intuitive to use
	2. facilitate the exchange of views between experts
	3. record outcomes of discussions during the TWP sessions.
4. The UPOV website should allow users to sign-up for notification if a new version of a TG is uploaded to the UPOV website.

Things that could be considered for future test guidelines:

1. To include interactive images and videos.
2. Incorporating a data entry function to record measurements or note observations.  Which could lead to:
3. Functionality to create final reports and variety descriptions.

[Annex II follows]

TC SUBGROUP ON TEST GUIDELINES

2025 Consultation of Technical Working Parties

[see pdf version of the document]

[Annex III follows]

**Test Guidelines for Pea: TG/7/10 (09/04/2014) Additional Characteristic**

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| --- | --- | --- |
|  CPVO - QZ |  Contact Expert: Name:  |  Céline Morineau |

Submitting Authority:

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|  09/12/2024 |

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|  morineau@cpvo.europa.eu |

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|   |   |  English  |  français  |  deutsch  |  español  | Example Varieties/Exemples/Beispielssorten/Variedades ejemplo  |  Note/ Nota  |
| **New 1.**  | **VS**  | **Resistance to *Peronospora viciae* (Pv) (downy mildew)** | **Résistance à *Peronospora viciae* (Pv) (downy mildew)** | **Resistenz gegen *Peronospora viciae* (Pv) (downy mildew)** | **Resistencia a *Peronospora viciae* (Pv) (downy mildew)** |  |  |
| **QL**  |   | absent | absente | fehlend  | ausente  |  Bingo, Bikini  | 1  |
|  |  | present | présente  | vorhanden  | presente |  Idalgo, SV0969QH  | 9  |

Explanation / Illustration (including extent of the use of the characteristic(s)):

Resistance to Resistance to *Peronospora viciae* (Pv) (downy mildew):

|  |  |  |
| --- | --- | --- |
| 1.  | Pathogen  | *Peronospora viciae* f.sp*. pisi*  |
| 2.  | Quarantine status  | no  |
| 3.  | Host species  | Pea – *Pisum sativum* L.  |
| 5.  | Isolate  | Available at Naktuinbouw  |
| 6.  | Establishment isolate identity  | On resistant control variety  |
| 7.  | Establishment pathogenicity  | On susceptible control variety  |
| 8.  | Multiplication inoculum  |   |
| 8.1  | Propagation medium  | Susceptible variety  |
| 8.2  | Propagation variety  | Bingo or other susceptible variety  |
| 8.3  | Stage plant at inoculation  | 2-3 true leaves  |
| 8.4  | Inoculation medium  | Cold tap water  |
| 8.5  | Inoculation method  | Spray spore  |
| 8.6  | Harvest of inoculum  | Sporulating leaves and tendrils in a centrifuge tube. Add 40 ml of tap water and vortex for 1 minute at +/- 2400 RPM. Sieve spore suspension through cheesecloth.  |
| 8.7  | Control harvested inoculum  | count spores  |
| 9.  | Trial duration   | Day Action 0 sowing 14 inoculate 24 1st assessment 24-28 final assessment  |
| 9.1  | Total number of plants  | 35 seeds, min. 20 plants  |
| 9.2  | Number of repetitions  | no repetition  |
| 9.3  | Control varieties  | Susceptible control: Bingo Resistant control: Idalgo  |
| 9.5  | Test facility  | Climate chamber  |
| 9.6  | Temperature  |  13°C D/N  |
| 9.7  | Light  | 13 hours light 8.000-10.000 Lux  |
| 9.8  | Season  | year round  |
| 10.  | Inoculation  |   |
| 10.1  | Preparation inoculum  | See 8.6  |
| 10.2  | Quantification inoculum  | Minimum 1 x 105 and maximum 5 x 105 spores/ml  |
| 10.3  | Plant stage at inoculation  | Cotyledon stage  |
| 10.4  | Inoculation method  | Spray spore suspension  |
| 10.5  | 1st assessment  | 10 days after inoculation  |
|   | 2nd assessment   | 14 days after inoculation  |
| 10.6  | Final evaluation   | 10 to 14 days after inoculation  |
| 11.  | Observations  |   |
| 11.1  | Method  | Visual  |
| 11.2  | Observation scale  | Class 1: No symptoms Class 2: Local necrosis Class 3: Limited sporulation with local necrosis Class 4: Strong sporulation on the leaf and/or tendrils Class 5: Strong sporulation on the leaf, tendrils and stem  |

This additional characteristic was approved for testing a specific variety and could be used in the future for other varieties of the same species.

[Annex IV follows]

TECHNICAL QUESTIONNAIRE, SECTION 4.2: “METHOD OF PROPAGATING THE VARIETY”

[see pdf version of the document]

[End of Annex IV and of document]

1. Technical Committee, sixtieth session, held in Geneva on October 21 and 22, 2024. See document TC/60/8 “Report”, paragraphs 33 to 36 [↑](#footnote-ref-2)
2. Technical Committee, sixtieth session, held in Geneva, on October 21 and 22, 2024. [↑](#footnote-ref-3)
3. Technical Committee, fifty-ninth session, held in Geneva, on October 23 and 24, 2023. [↑](#footnote-ref-4)
4. Technical Committee, sixtieth session, held in Geneva on October 21 and 22, 2024. See document TC/60/8 “Report”, paragraphs 64 and 65 [↑](#footnote-ref-5)