



UPOV

Technical Working Party for Ornamental Plants and Forest Trees

Fifty-Seventh Session

Roelofarendsveen, Kingdom of the Netherlands, March 31 to April 3, 2025

TWP/9/3

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Technical Working Party on Testing Methods and Techniques

Third Session

Beijing, China, April 28 to May 1, 2025

Technical Working Party for Vegetables

Fifty-Ninth Session Virtual meeting, May 5 to 8, 2025

Technical Working Party for Agricultural Crops

Fifty-Fourth Session

Arusha, United Republic of Tanzania, May 19 to 22, 2025

Technical Working Party for Fruit Crops

Fifty-Sixth Session

Bursa, Türkiye, June 23 to 26, 2025

TEST GUIDELINES: SUPPORT FOR DRAFTERS; ADDITIONAL CHARACTERISTICS; AND METHODS OF PROPAGATING THE VARIETY

Document prepared by the Office of the Union

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EXECUTIVE SUMMARY

1. 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

- 2. 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, paragraph 61).
- 3. 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

- 4. 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.
- 5. 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.
- 8. The structure of this document is as follows:

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9. The following abbreviations are used in this document:

> TC: **Technical Committee**

TC-EDC: **Enlarged Editorial Committee**

TWA: Technical Working Party for Agricultural Crops

Technical Working Party for Fruit Crops TWF:

Technical Working Party on Testing Methods and Techniques TWM: 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

- 10. The TC, at its sixtieth session¹, 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).
- 11. 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.
- 12. 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

- 13. 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.
 - 14. 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

- 15. 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.
- 16. 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 <u>international cooperation</u> in variety examination.

Training and distance learning

Updating distance learning courses

17. 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

18. 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.

¹ Technical Committee, sixtieth session, held in Geneva on October 21 and 22, 2024. See document TC/60/8 "Report", paragraphs 33 to

19. 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

- 20. The TC noted that the Office of the Union would organize a <u>webinar</u> 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 <u>YouTube channel</u>.
- 21. The TC agreed to support UPOV members promoting training opportunities, including their inclusion in the UPOV PVP Certificate program.
 - 22. The TWPs are invited to note:
 - (a) 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:

23. At its sixtieth session², 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 session³ 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

24. Document <u>TGP/5</u>, <u>Section 10</u> "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."

² Technical Committee, sixtieth session, held in Geneva, on October 21 and 22, 2024.

³ Technical Committee, fifty-ninth session, held in Geneva, on October 23 and 24, 2023.

Additional characteristics and states of expression notified

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

- 25. 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)
- 26. 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" page of the UPOV website and/or whether to initiate a partial revision of the Test Guidelines.

27. The TWV is invited to:

- (a) note the additional characteristic notified on the Test Guidelines for Pea (document TG/7/10), as set out in Annex III to this document;
- (b) consider whether the additional characteristic should be posted on the Additional Characteristics page of the UPOV website; and
- (c) 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"

- 28. 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.
- 29. The TC, at its sixtieth session⁴ 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:

⁴ Technical Committee, sixtieth session, held in Geneva on October 21 and 22, 2024. See document TC/60/8 "Report", paragraphs 64 and 65

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

- 30. 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.
 - 31. 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]

ANNEX I

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.

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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:

- (a) Formatted in such a way:
 - (i) to allow automatic translation
 - (ii) easier access to details
 - (iii) to allow the inclusion of information related to molecular techniques
- (b) Separate the TQ from the TG
- (c) Drafting tool should:
 - (iv) Be intuitive to use
 - (v) facilitate the exchange of views between experts
 - (vi) record outcomes of discussions during the TWP sessions.
- (d) 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:

- (e) To include interactive images and videos.
- (f) Incorporating a data entry function to record measurements or note observations. Which could lead to:
- (g) Functionality to create final reports and variety descriptions.

TC Sub-Group on Test Guidelines

TWP consultation (2025)

Background

- TC agreed to establish a sub-group to review the Test Guidelines the terms of reference are in TC/59/28 (paragraph 61)
- The group members were invited to provide their individual experience and opinions on the use of UPOV Test Guidelines
- Light summary was presented to the TWPs during their 2024 sessions
- A full summary was presented to the TC at its 60th Session TC/60/6Rev. (paragraphs 20 to 42)

UPOV Test Guidelines

- are important for the harmonization of DUS testing
- need to be adapted to meet current needs
- need to be adaptable to be able to meet future needs
- need your input!

This is a discussion not a presentation.

You are encouraged to contribute ideas and opinions.

How could...

- the language be simplified?
- the text be streamlined?
- explanations be improved?
- the explanations be more easily accessible?
- the layout be improved to allow better use of space?
 - Eg maybe the table of characteristics be presented in only the language of the document?
- the text be automatically translated?

Example varieties

- Guidance on the use of example varieties is provided in GN28 which is under revision.
- The intention of including this as an item in this discussion is to gauge the need for changes to the test guideline format
 - Where a regional set of example varieties is used, should the region be indicated in the TG?
 - Do we need easier access to other regional sets, that are currently not included in the TG? Or,
 - Do we need a better way of indicating the availability of regional sets?

Explanations where a method is provided

- For example:
 - Disease resistance characteristics
 - Protein electrophoresis
 - Molecular markers and/or associated methods
- Is there a better way to format the information
- Do we need a better way to update the methods or add additional methods to the TG?
- Should they be included in the TG or as a standalone document?

Online Questionnaire time!

TG Template – suggested updates

- ✓ Moved to a different platform
 - Improved speed
- Better image uploading
- ✓ Formatting issues resolved
- New export
- Opposition of the second of
- · A method to track changes between drafts
- · A visible timeline to track stages of drafting process
- · Automatic translation
- Chat function
- · Ability to receive notifications
- · Capacity to draft national test guidelines

For more information on changes already happening catch-up on the presentation by the Office from the pre-TWP workshops

Future functionality

- Interactive Test Guideline
- Data entry function
- Create final reports and variety descriptions
- Anything else?

Another online questionnaire

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Next steps

- The presentation and questionnaires will be repeated at all the TWPs
- A summary of the discussions and questionnaires will be presented to the Technical Committee at its 61st session.

Please contact Margaret Wallace if you have any comments or suggestions that have not been captured during this session.

[Annex III follows]

TWP/9/3

ANNEX III

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

Submi	tting /	Authority: CF	PVO - QZ	Contact E	Expert: Name:	Céline Morineau	
Date: (Orgar	nization: 09	/12/2024		[
		_					
					E-mail:	morineau@cpvo.europa.eu	
		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
New 1.	vs	Resistance to Peronospora viciae (Pv) (downy mildew		Resistenz gegen Peronospora viciae (Pv) (downy mildew)	Resistencia a Peronospora vici (Pv) (downy mild	iae	
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):

	Dethoron					
<u>1.</u>	Pathogen 	Peronospora viciae f.sp. pisi				
<u>2.</u>	Quarantine status	no				
<u>3.</u>	Host species	Pea – <i>Pisum sativum</i> L.				
<u>5.</u>	Isolate	Available at Naktuinbouw				
<u>6.</u>	Establishment isolate identity	On resistant control variety				
<u>7.</u>	Establishment pathogenicity	On susceptible control variety				
<u>8.</u>	Multiplication inoculum					
<u>8.1</u>	Propagation medium	Susceptible variety				
<u>8.2</u>	Propagation variety	Bingo or other susceptible variety				
<u>8.3</u>	Stage plant at inoculation	2-3 true leaves				
<u>8.4</u>	Inoculation medium	Cold tap water				
<u>8.5</u>	Inoculation method	Spray spore				
<u>8.6</u>	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.				
<u>8.7</u>	Control harvested inoculum	count spores				
<u>9.</u>	Trial duration	Day Action				
		0 sowing				
		14 inoculate				
		24 1st assessment				
		24-28 final assessment				

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<u>9.1</u>	Total number of plants	35 seeds, min. 20 plants
<u>9.2</u>	Number of repetitions	no repetition
<u>9.3</u>	Control varieties	Susceptible control: Bingo
		Resistant control: Idalgo
<u>9.5</u>	Test facility	Climate chamber
<u>9.6</u>	Temperature	13°C D/N
<u>9.7</u>	Light	13 hours light 8.000-10.000 Lux
<u>9.8</u>	Season	year round
<u>10.</u>	Inoculation	
<u>10.1</u>	Preparation inoculum	See 8.6
<u>10.2</u>	Quantification inoculum	Minimum 1 x 10⁵ and maximum 5 x 10⁵ spores/ml
<u>10.3</u>	Plant stage at inoculation	Cotyledon stage
<u>10.4</u>	Inoculation method	Spray spore suspension
<u>10.5</u>	1st assessment	10 days after inoculation
	2nd assessment	14 days after inoculation
<u>10.6</u>	Final evaluation	10 to 14 days after inoculation
<u>11.</u>	Observations	
<u>11.1</u>	Method	Visual
<u>11.2</u>	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]

TWP/9/3

ANNEX IV

TECHNICAL QUESTIONNAIRE, SECTION 4.2: "METHOD OF PROPAGATING THE VARIETY"

CODE	ENGLISH	<u>FRANÇAIS</u>	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
004	Ryegrass	Ray-grass	Weidelgras	Raygrás	Lolium perenne L.; Lolium multiflorum Lam. ssp. italicum (A. Br.) Volkart; Lolium multiflorum Lam. var. westerwoldicum Wittm; Lolium boucheanum Kunth; Lolium rigidum Gaudin.

4.2 Method of propagating the variety

Information on method of propagating the variety

- Single hybrid
- □ Double hybrid

- ☑ Other (please specify):

⊠ Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
006	Lucerne	Luzerne	Luzerne	Alfalfa	Medicago sativa L., Medicago X varia Martyn

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

⊠ Vegetatively propagated varieties

- Other (please specify):
- Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
007	Pea	Pois	Erbse	Guisante	Pisum sativum L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Seed-propagated varieties

Self-pollination

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
010	Euphorbia Fulgens	Euphorbia fulgens	Korallenranke	Euforbia	Euphorbia fulgens Karw. ex Klotzsch

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
021	Poplar	Peuplier	Pappel	Álamo	Populus L.

4.2 Method of propagating the variety

Information on method of propagating the variety

- □ Cuttings
- ☑ In vitro propagation

\boxtimes Other (please specify):

CODE	ENGLISH	FRANÇAIS	<u>DEUTSCH</u>	<u>ESPAÑOL</u>	<u>LATIN</u>
038	White Clover	Trèfle blanc	Weissklee	Trébol blanco	Trifolium repens L.

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

- - □ Cross-pollination-synthetic variety
- Other (please specify):

□ Vegetatively propagated varieties

- □ Cuttings

⊠ Other (please specify):

CODE	ENGLISH	FRANÇAIS	<u>DEUTSCH</u>	ESPAÑOL	<u>LATIN</u>
039	Tall Fescue	Fétuque des prés, Fétuque élevée	Wiesen-, Rohrschwingel	Festuca pratense, Festuca alta	Festuca pratensis Huds. / Festuca arundinacea Schreb.

4.2 Method of propagating the variety

Information on method of propagating the variety

$oxed{\boxtimes}$ Seed-propagated varieties

- Self-pollination
- \boxtimes Other (please specify):

- Other (please specify):
- Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
047	Streptocarpus	Streptocarpus	Drehfrucht	Streptocarpus	Streptocarpus X hybridus Voss

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CC	DDE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
06	2	Rhubarb	Rhubarbe	Rhabarber	Ruibarbo	Rheum rhabarbarum L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Seed-propagated varieties

Cross-pollination

Other (please specify):

Vegetatively propagated varieties

Tuber

Cuttings

in vitro propagation

Division

Rhizomes

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
066	Lupins	Lupins	Lupinen	Altramuz	Lupinus albus L., L. angustifolius L., L. luteus L.

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

- \boxtimes Other (please specify):

⊠ Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	<u>DEUTSCH</u>	ESPAÑOL	<u>LATIN</u>
067	Red Fescue, Sheep's Fescue, Hair Fescue, Reliant Hard Fescue, Shade Fescue, Pseudovina	Fétuque rouge; Fétuque ovine, Fétuque des moutons; Fétuque à feuilles fines; Fétuque à feuilles scabres, Fétuque durette, Fétuque à feuilles rudes; Fétuque hétérophylle; Fétuque pseudovine	Rotschwingel; Schafschwingel; Feinblättriger Schwingel, Haar- Schaf-Schwingel; Härtlicher Schwingel; Borstenschwingel, Verschiedenblättriger Schwingel	Cañuela Roja, Festuca Roja; Cañuela de Oveja, Cañuela Ovina, Festuca Ovina	Festuca rubra L.; Festuca ovina L.; Festuca filiformis Pourr.; Festuca brevipila R. Tracey; Festuca heterophylla Lam.; Festuca pseudovina Hack. ex Wiesb.

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

□ Vegetatively propagated varieties

- **⊠** Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
069	Forsythia	Forsythia	Forsythie	Forsythia	Forsythia Vahl

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
079	White Cedar	Thuya du Canada	Lebensbaum	Tuya	Thuya occidentalis L.

4.2 Method of propagating the variety

Information on method of propagating the variety

✓ Vegetatively propagated varieties

- □ Cuttings
- ☑ In vitro propagation

⊠ Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
087	Narcissi (including Daffodils)	Narcisse, Jonquille	Narzisse	Narciso	Narcissus L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

in vitro propagation

Division

Bulbs

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
091	Crown of Thorns	Épine du Christ	Christusdorn	Azofaifa de la espina de Cristo	Euphorbia milii Desmoulins and its hybrids

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
103	Juniper	Genévrier	Wacholder	Enebro	Juniperus L.

4.2 Method of propagating the varietyInformation on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Budding or grafting

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
104	Melon	Melon	Melone	Melón	Cucumis melo L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Seed-propagated varieties Self-pollination Cross-pollination Cross-pollination Hybrid Single hybrid Inbred line Other (please specify):

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
112	Mango	Manguier	Mango	Mango	Mangifera indica L.

4.2 Method of propagating the variety

Information on method of propagating the variety

☒ Vegetatively propagated varieties

- □ Cuttings
- ☑ In vitro propagation

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
113	Easter Cactus	Cactusjonc	Osterkaktus	Cactus de Pascua	Rhipsalidopsis Britt. et Rose, including Epiphyllopsis Berger

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
114	Exacum	Exacum	Exacum	Exacum	Exacum L.

4.2 Method of propagating the variety

Information on method of propagating the variety

▼ Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
115	Tulip	Tulipe	Tulpe	Tulipán	Tulipa L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

in vitro propagation

Division

Bulbs

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
119	Vegetable Marrow, Squash	Courgette	Zucchini	Calabacín	Cucurbita pepo L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Seed-propagated varieties Self-pollination Cross-pollination Cross-pollination Hybrid Single hybrid Inbred line Other (please specify): Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
126	Lachenalia	Lachenalia	Lachenalia	Lachenalia	Lachenalia Jacq. f. ex Murray

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	<u>DEUTSCH</u>	<u>ESPAÑOL</u>	<u>LATIN</u>
127	Leucadendron	Leucadendron	Leucadendron	Leucadendron	Leucadendron R. Br.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
128	Leucospermum	Leucospermum	Leucospermum	Leucospermum	Leucospermum R. Br.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
129	Protea	Protea	Protea	Protea	Protea L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
131	Chincherinchee	Ornithogale	Milchstern	Ornithogalum	Ornithogalum L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

in vitro propagation

Division

Bulbs

Other (please specify):

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
132	Dieffenbachia	Dieffenbachia	Dieffenbachia	Dieffenbachia	Dieffenbachia Schott

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
135	Spathiphyllum	Spathiphyllum	Spathiphyllum	Spathiphyllum	Spathiphyllum Schott

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
141	Aster	Aster	Aster	Aster	Aster L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
144	Evening Primrose	Onagre	Nachtkerze	Onagra	Oenothera L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
147	Pyracantha, Firethorn	Pyracantha, Buisson Ardent	Feuerdorn	Espino de fuego	Pyracantha M.J. Roem.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

CODE	ENGLISH	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
156	Ifafa Lily	Cyrtanthus	Cyrtanthus	Cyrtanthus	Cyrtanthus Ait.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

in vitro propagation

Division

Bulbs

Other (please specify):

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
165	Dill	Aneth	Dill	Eneldo	Anethum graveolens L.

4.2 Method of propagating the variety

Information on method of propagating the variety

Seed-propagated varieties

Self-pollination

Cross-pollination

Cross-pollination-population

Hybrid

Single hybrid

Other (please specify):

Vegetatively propagated varieties

Cuttings

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
167	Okra	Okra	Okra	Ocra	Abelmoschus esculentus (L.) Moench

4.2 Method of propagating the variety

Information on method of propagating the variety

Seed-propagated varieties Self-pollination Cross-pollination Cross-pollination Hybrid Single hybrid

Vegetatively propagated varieties

Other (please specify):

Other (please specify):

Cuttings
in vitro propagation

Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
174	Iris (bulbous)	Iris (bulbeux)	Iris (zwiebelbildende)	Lirio (bulboso)	Iris L.

4.2 Method of propagating the variety

Information on method of propagating the variety

V	Vegeta	tively propagated varieties
	~	in vitro propagation
	V	Division
	V	Bulbs
	~	Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
178	Fodder Radish	Radis oléifère	Ölrettich	Rábano oleaginoso	Raphanus sativus L. var. oleiformis Pers.

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

⊠ Other (please specify):

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	<u>DEUTSCH</u>	<u>ESPAÑOL</u>	<u>LATIN</u>
179	White Mustard	Moutarde blanche	Weisser Senf	Mostaza blanca	Sinapis alba L.

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Other (please specify):

CODE	ENGLISH	<u>FRANÇAIS</u>	<u>DEUTSCH</u>	ESPAÑOL	<u>LATIN</u>
180	Rescue Grass, Alaska Brome- grass, Bromus Auleticus	Brome cathartique, Brome sitchensis, Bromus auleticus	Horntrespe, Alaska- Trespe, Bromus Auleticus	Triguillo	Bromus catharticus Vahl., Bromus sitchensis Trin., Bromus auleticus Trin.

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

CODE	<u>ENGLISH</u>	<u>FRANÇAIS</u>	<u>DEUTSCH</u>	<u>ESPAÑOL</u>	<u>LATIN</u>
214	Catharanthus	Pervenche de Madagascar	Zimmerimmergrün	Vinca pervinca	Catharanthus roseus (L.) G. Don

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
216	Hypericum hircinum L., H. androsaemum L., H. x inodorum Mill.		Hypericum hircinum L., H. androsaemum L., H. x inodorum Mill.	hircinum L., H. androsaemum	Hypericum hircinum L., H. androsaemum L., H. x inodorum Mill.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

Cuttings

in vitro propagation

Other (please specify):

Other (please specify):

CODE	ENGLISH	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
227	Нор	Houblon	Hopfen	Lúpulo	Humulus lupulus L.

4.2 Method of propagating the variety

Information on method of propagating the variety

 $oxed{\boxtimes}$ Cuttings

⊠ Rhizomes

CODE	ENGLISH	<u>FRANÇAIS</u>	<u>DEUTSCH</u>	<u>ESPAÑOL</u>	<u>LATIN</u>
228	Medics	Luzernes annuelles	Medicago L. (ohne M. sativa L.)	Medicago L. (excl. M. sativa L.)	Medicago L. (excl. M. sativa L.)

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

⊠ Other (please specify):

CODE	<u>ENGLISH</u>	FRANÇAIS	<u>DEUTSCH</u>	<u>ESPAÑOL</u>	<u>LATIN</u>
248	Common Millet	Millet commun	Rispenhirse	Mijo común	Panicum miliaceum L.

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

CODE	ENGLISH	<u>FRANÇAIS</u>	DEUTSCH	ESPAÑOL	<u>LATIN</u>
249	Coffee	Caféier	Kaffee	Cafeto	Coffea arabica L.; C. canephora Pierre ex A. Froehner; C. arabica x C. canephora hybrids

4.2 Method of propagating the variety

Information on method of propagating the variety

⊠ Seed-propagated varieties

- Single hybrid
- □ Double hybrid

⊠ Vegetatively propagated varieties

- □ Cuttings
- ☑ in vitro propagation Tissue Culture or micropropagation; Indirect Somatic Embryogenesis

⊠ Other (please specify):

CODE	ENGLISH	FRANÇAIS	DEUTSCH	ESPAÑOL	<u>LATIN</u>
282	Shiitake	Shiitake	Pasaniapilz	Shiitake	Lentinula edodes (Berk.) Pegler, Lentinus elodes (Berk.) Sing.

4.2 Method of propagating the variety

Information on method of propagating the variety

Vegetatively propagated varieties

CODE	<u>ENGLISH</u>	FRANÇAIS	DEUTSCH	<u>ESPAÑOL</u>	<u>LATIN</u>
291	Oyster Mushroom; Eringi, King Oyster Mushroom; Lung Oyster Mushroom	Pleurote en coquille	Austernseitling, Drehling;		Pleurotus ostreatus (Jacq.) P. Kumm.; Pleurotus eryngii (DC.) Quél.; Pleurotus pulmonarius (Fr.) Quél.

4.2 Method of propagating the varietyInformation on method of propagating the variety

V Vegetatively propagated varieties

V Other (please specify):

[End of Annex IV and of document]