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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

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TECHNICAL COMMITTEE

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REVIEW OF UPOV INFORMATION DATABASES AND SERVICE

Document prepared by the Office of the Union

BACKGROUND

1. The following table identifies four important UPOV documents, which are currently based on UPOV databases:

Ref.	Title	Function(s)
C/34/6 Rev.[1]	List of the taxa protected in the member States of UPOV and in those States and Organizations that have initiated the procedure for acceding to UPOV and which have provided information (see extract in Annex I)	The UPOV Convention requires, for each Contracting Party, publication of the list of plant genera and species covered by the UPOV Convention.
C/34/5[1]	Cooperation in examination (see extract in Annex II)	To provide information to those Contracting Parties wishing to cooperate in Distinctness, Uniformity and Stability (DUS) Testing.

[1] updated every year.

Ref.	Title	Function(s)
TC/36/4[1]	List of species in which practical technical knowledge has been acquired or for which national guidelines have been established (see extract in Annex III)	To identify Contracting Parties with DUS Testing experience where Test Guidelines are unavailable.
UPOV-ROM[2]	Plant variety database	Current use is to provide a database of varieties, which can be searched for checking suitability of variety denominations. Further possible uses are discussed later in this document.

2. At present these four documents are constructed around basic taxonomic units (i.e. species, genera etc.), however, they all use different and independent databases. For example, document C/34/5 (Cooperation in Examination) contains approximately 350 different taxonomic units, documents C/34/6 Rev. (List of Taxa Protected in the Member States of UPOV) and TC/36/4 (List of Species in Which Practical Technical Knowledge has Been Acquired) contain approximately 1,000 such units and the UPOV-ROM has over 4,000 different taxonomic entries.

3. In the case of the UPOV-ROM, the very high number reflects the fact that contributors are free to enter the taxonomic unit as they wish, leading to many slightly different versions of the same species. Annex IV demonstrates a selection of different entries for *Triticum aestivum.* Within document C/34/6 Rev. the 1,000 units include a number of synonyms (e.g. tomato is entered under both *Lycopersicon lycopersicum* (L.) Karst. ex Farwell and *Solanum lycopersicum* L.). However, the difference in the number of entries between the different documents is not entirely due to duplication and there is some divergence in the species included in documents C/34/6 Rev., TC/36/4, and the UPOV-ROM.

4. There are two issues which arise from this situation, namely the elimination of duplication to enable effective searching of the databases and the need to maintain a complete and accurate list of taxa as the basis for advice to Contracting Parties.

(i) Searching the UPOV Databases

5. The duplication of entries inhibits the efficiency of the database for searching purposes. For example, to search the UPOV-ROM to see if a variety denomination is acceptable currently requires a search of all species. This can lead to the result that there are many uses of the denomination which have to be assessed for relevance, e.g. a proposed name for a variety of *Hordeum* is not acceptable if it has already been used for a variety in the same UPOV denomination class (*Hordeum, Avena, Secale, Triticale* or *Triticum*), but is acceptable if it has been used for a variety of any other species. It would be much more efficient and

[1] updated every year
[2] updated every second month

perhaps more reliable to be able to conduct the search for only those species which are in the same class. However, to refine the search in such a way, it would be essential to know all the possible synonyms and forms of entry to conduct an accurate search. For example, if searching the database for denominations of tomato, it would be necessary to search for all the different Latin synonyms (*Lycopersicon lycopersicum* (L.) Karst. ex Farwell*; L. esculentum* P. Mill.; *Solanum lycopersicum* L.; L. *esculentum* P. Mill. *nom. cons. var. esculentum & var. cerasiforme* (Dun.) A. Gray) and all the possible slight variations for each form (e.g. *Solanum lycopersicum* L.; S. *lycopersicum* L.; etc.). Failure to do so could result in the wrong approval of a denomination.

6. Another example is that, at present, it is possible to use the UPOV-ROM to find out the total number of titles of protection which have been entered into the database, but, because of all the variations in taxonomic descriptors, it is not possible to conduct a quick or certain search for the number of titles for a single species. It is even less practical to conduct such a search for the number of protected varieties (a single variety may have several titles of protection) because it would be necessary to first identify the number of titles and then determine the number of unique denominations. However, it may be useful for general UPOV purposes to be able to establish the number of protected varieties for a particular species and also to provide guidance on the need for the development of new Test Guidelines.

(ii) Providing Effective Advice

7. The omission of any species from the databases, e.g. from document TC/36/4 (List of Species in Which Practical Technical Knowledge has Been Acquired) means that the advice available to Contracting Parties may not be as complete as possible.

8. Both these issues in (i) and (ii) could be addressed by establishing a common database of all UPOV recognized “taxonomic” units which could be identified by a unique “UPOV taxon code” to facilitate search functions.

9. In addition to these two aspects there is a further aspect within UPOV where the introduction of a definitive UPOV taxon code may improve the effectiveness of technical guidance:

(iii) Coverage of Test Guidelines

10. As explained in document TC/37/3 (Matters Arising from the 1999 Sessions of the Technical Working Parties to be Dealt with by the Technical Committee, Section 9(f)), the TWV has identified problems resulting from ambiguities regarding Latin names. The Latin names define the coverage of each Test Guidelines and, in many cases, play significant roles in the judgement of distinctness through classifying varieties into different groups (species) which will not be compared. However, the classification by Latin names is not always obvious because of the lack of clear definitions of Latin names or the existence of different schools of plant nomenclature. If the coverage of the Test Guidelines is established according to a UPOV taxon code it would be possible, through an actively maintained and accessible database, for users of the Test Guidelines to identify all Latin and common (in all UPOV languages) names covered by the code(s) specified for the Test Guidelines.

UPOV TAXON CODE

11. UPOV has discussed the introduction of a taxonomic code (see document TC/35/16, "Revised Working Paper for a UPOV Taxon Code for Use in the UPOV-ROM Plant Variety Database") and it may be possible that any such code can be developed to enhance the search abilities for various databases, rather than just eliminating duplication. For example, it may be beneficial to identify within the code which variety denomination class the unit belongs to.

12. It may also be appropriate, for DUS examination purposes, to consider including certain elements in the code that facilitate searching for similar varieties, e.g. by differentiating agronomic or utilization groups recognized in the Test Guidelines. However, it is more likely that, if UPOV decides to pursue the introduction of variety descriptions into the UPOV-ROM, a separate variety based code would incorporate this information. The Office of the Union will investigate the options for incorporating variety description information in the UPOV-ROM in accordance with the position of the Technical Committee (hereinafter referred to as "the Committee") and that of the Administrative and Legal Committee, which is currently considering this issue (see document CAJ/43/5, "Publication of Variety Descriptions").

13. As explained in document TC/35/16, it is first necessary to establish a definitive list of taxa and then introduce a unique code, which may be developed in a way which also enhances the searching facility of the databases. The next section considers how the Office of the Union might approach this.

DEVELOPING A UPOV LIST OF TAXA AND PROVIDING A UNIQUE IDENTIFIER CODE

14. In the first instance it is necessary to identify all the relevant taxa which require a code for UPOV purposes. Under the 1991 Act of the UPOV Convention, protection is made available to all genera and species. However, in practice the list should only need to cover those taxa for which varieties have already been protected or for which protection of varieties is likely to be sought in the near future. Document TC/35/16 has already provided a starting list but will require some updating. The list should be checked against document C/34/6 Rev. However, this only specifies taxa where countries are not operating under the 1991 Act of the UPOV Convention and may not specify all the relevant taxa. For this reason, it would also be appropriate to search the UPOV-ROM for other taxa for which there are protected varieties. Once the list had been produced, it would be updated according to new notifications, of genera and species protection, from Contracting Parties not bound by the 1991 Act of the UPOV Convention and by requests for codes for new taxa being entered into the UPOV-ROM for Contracting Parties bound by the 1991 Act.

15. It would be necessary to establish a core database of all the taxonomic synonyms which was readily accessible for searching by anyone entering information into a UPOV database. This would mean at least its inclusion on the UPOV-ROM and perhaps on the UPOV Web site.

16. The proposal in TC/35/16 is for an alphabetic code according to the following system:

> AAAAA (Genus): BBB (Species): CCC (Sub-specific unit): DDD (Further subgroup unit, if necessary).

17. The construction of the code will need to be considered according to its purpose but assuming it is used to eliminate duplications and identify variety denomination groupings according to the current UPOV Guideline, it may be considered more useful to have the following basis:

123 (UPOV Variety Denomination Class)[1]: XXX[2] (Genus [1]): YYY[2] (Species): ZZZ (Subspecies)

[1] Under the UPOV Convention, the same denomination cannot be used for a variety of a closely related species and currently all taxonomic units are considered closely related if they belong to the same botanical genus or are in the same UPOV class.

[2] It is suggested that a three-letter code would be sufficient as this provides for over 17,000 unique codes. A numeric code may actually be more flexible but would limit the possibilities to 1,000 unique codes.

REVIEW OF CURRENT REPORTS

18. It is very clear that the information in documents C/34/5 (Cooperation in Examination) and TC/36/4 (List of Species in Which Practical Technical Knowledge has Been Acquired), and on the UPOV-ROM is of practical value to UPOV Contracting Parties. However, it is less easy to see the practical value of presenting document C/34/6 Rev. (List of Taxa Protected in the Member States of UPOV) in a consolidated form. The UPOV Convention requires publication of the list of plant genera and species covered by the UPOV Convention for each Contracting Party. However, it does not state that this must be presented in the form of a consolidated database as currently prepared. Indeed, it could be argued that the existing arrangements for publishing this information in the UPOV Gazette and Newsletter "Plant Variety Protection" fulfill any requirement under the UPOV Convention. The database requires a lot of time to update and poses several practical difficulties for the Office of the Union when attempting to harmonize entries, particularly where the genus or species is not clearly identified, e.g. where the list is provided in the form of common names. The information, exactly as presented by the Contracting Party, could be kept in a simple database which would allow users to quickly display the species protected by a particular Contracting Party. Any queries regarding terms used could then be directed at the Contracting Party rather than requiring the Office to make an interpretation.

FUTURE ACTION

19. The Committee is invited to review its position and agree to the following approach:

(a) consider if the value of improved database searching efficiency, completeness of advice to Contracting Parties and clarification of coverage of Test Guidelines justifies further work on the development of a UPOV taxon code;

(b) invite the Office of the Union to select, from interested parties, a small ad hoc working group of technical and administrative experts to:

(i) review the practical value of the existing UPOV documents considered in this document and propose any possible improvements;

(ii) in accordance with the decision in (a) and any findings in (b(i)),

- *review the proposed structure of the taxon code with a view to maximizing its practical value and propose a program for introduction, and*

- *identify the resources required for the introduction and maintenance of such a code together with an analysis of benefits for Contracting Parties.*

[Annex I follows]

ANNEX I

Extract from Document C/34/6 Rev., List of Taxa Protected in the Member States of UPOV"

Latin	English	Français	Deutsch	Español	AT	BE	BG	BR	CH	CN	CZ	IE	IT	KE	KG	KR	MA	MD	PA	PL	PT	PY	RU	SI	TT	UA	UY	ZA	ZW
Abelia R. Br.*	Abelia	Abelia	Abelia	Abelia	·	·	·	·	+	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Abies Mill.	Fir	Sapin	Tanne	Abeto	·	·	·	·	+	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Abutilon Mill.*	Abutilon	Abutilon	Abutilon	Abutilon	·	X	·	·	+	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	X	·
Abutilon mollis Sweet*	-	-	-	-	·	+	·	·	+	·	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	+	·
Abutilon theophrasti Medik.*	-	-	Chinesischer Hanf, Chinesische Jute, Samtpappel	-	·	+	·	·	+	·	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	+	·
Acacia Mill.*	Acacia	Acacia	Akazie	Acacia	·	·	·	·	+	·	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Acacia podalyriifolia A. Cunn. ex G. Don	Queensland Silver-wattle, Pearl Acacia	-	-	-	·	·	·	·	+	·	·	·	+	·	·	·	·	·	·	·	·	·	·	·	·	·	·	X	·
Acanthaceae	Acanthaceae	Acanthacées	Bärenklaugewächse	Acantáceas	·	·	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Acca sellowiana (Berg) Burret* [Feijoa sellowiana (Berg) Berg]	Feijoa	Feijoa	Feijoa	Feijoa	·	·	·	·	+	·	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Acer L.*	Maple	Érable, Sycomore	Ahorn	Arce	·	·	·	·	+	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Acer negundo L.	Box Elder	Négondo	Eschenahorn	-	·	·	·	·	+	·	+	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
*Acer platanoides L.	Norway Maple	Érable plane	Spitzahorn	-	·	·	·	·	+	·	+	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Aceraceae	Aceraceae	Acéracées	Ahorngewächse	Aceráceas	·	·	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Achillea L.*	Milfoil, Yarrow	Achillée	Schafgarbe	Milenrama, Aquilea, Altarreina, Milhojas	·	X	·	·	+	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
*Achillea millefolium L.	Common Yarrow	Achillée millefeuille	Schafgarbe	Milenrama	·	+	·	·	+	·	·	·	·	·	·	·	·	·	·	X2	·	·	·	·	·	·	·	·	·
Aconitum L.	Monkshood	Aconit	Eisenhut	Acónito, Anapelo	·	X	·	·	+	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Acrostichaceae	Acrostichaceae	Acrostichacées	Saumfarne	Acrosticáceas	·	·	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Actinidia Lindl.	Actinidia	Actinidia	Strahlengriffel	Actinidia	·	·	·	·	+	·	X	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
Actinidia partim	Actinidia	Actinidia	Strahlengriffel	Actinidia	·	·	·	·	+	·	+	·	+	·	·	·	·	·	·	·	·	·	X	·	·	·	·	·	·
Actinidia chinensis Planch.	Kiwifruit	Actinidia, Groseille de Chine	Kiwifrucht	Kiwi	·	X	·	·	+	·	+	·	+	·	·	·	·	·	·	·	·	·	X	·	·	·	·	X	·
Actinidiaceae	Actinidiaceae	Actinidiacées	Strahlengriffel-gewächse	Actinidiáceas	·	·	·	·	X	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·

[Annex II follows]

ANNEX II

Extract from Document C/34/5, "Cooperation in Examination"

No.	Taxon	Offering/ examining States	States receiving examination reports	States exchanging examination reports
	1	2	3	4
1	*Achillea* L. Milfoil, Yarrow Achillée Schafgarbe Milenrama, Aquilea, Altarreina, Milhojas	NL	BE DE[1]	–
2	*Achimenes* Pers. Achimenes Schiefteller Achimenes	DE	NL	–
3	*Aechmea* Ruiz et Pav.	NL	BE DE GB	–
4	*Aeschynanthus* Jack	DE	DK EU NL	–
5	*Agaricus* L. Mushroom Champignon de couche Champignon Champiñón	NL	(GB)	–
6	*Ageratum* L. Ageratum, Flossflower Ageratum Leberbalsam Agérato	DE	NL[1]	–
7	*Agrostis* L.[+] Bentgrass Agrostis, Agrostide Straußgras Agróstide	NL PL	DE NO SE HU	–
8	*Agrostis canina* L. Velvet Bent Agrostis des chiens Hundsstraußgras Agróstide canina, de perro, perruna	NL PL	AT BE DE DK FR GB NO SE HU	–
9	*Agrostis gigantea* Roth Red Top (Black Bent) Agrostide géante Weißes Straußgras Agróstide blanca, Pastoquilla	NL PL	AT BE DE DK FR GB NO SE HU	–
10	*Agrostis stolonifera* L. Creeping Bent Agrostide stolonifère Flechtstraußgras Agróstide estoloníferа	CZ NL PL	SK AT BE DE DK FR GB NO SE HU	–
11	*Agrostis tenuis* Sibth. Brown Top, Common Bent Agrostide commune Rotes Straußgras Agróstide común	CZ NL PL	SK (AT) BE DE DK FR GB NO SE HU	– –

[Annex III follows]

ANNEX III

Extract from Document TC/36/4, "List of Species in Which Practical Technical Knowledge has Been Acquired or for Which National Guidelines Have Been Established"

Latin/latin/lateinisch/Latín

Abelia R. Br.*	GB a, b
Abelmoschus esculentus (L.) Moench*	JP a, b
Abies Mill.	DE a, b
Abies sachalinensis (Fr. Schmidt) Mast.	JP b
Acacia Mill.*	NZ a, b
Acanthopanax senticosus Harms	JP a, b
Acalypha L.	NL a
Acca sellowiana (Berg) Burret* [Feijoa sellowiana (Berg) Berg]	NZ a, b
Acer L.*	DE a, JP b, NL a, NZ a,b
*Acer platanoides L.	DE a, GB a, b
Achillea L.*	DE a, b, GB a, b, NL a
Achimenes Pers.*	DE a
Aconitum L.	JP b, NL a

[Annex IV follows]

ANNEX IV

UPOV-ROM Entries for *Triticum aestivum*

Triticum aestivum L. emend. Fiori & Paol.
Triticum aestivum
Triticum aestivum (L.) Emend. Fiori et P
Triticum aestivum L
Triticum aestivum L.
Triticum aestivum L. emend Fiori et Paol
Triticum aestivum L. emend Fiori et Paol.
TRITICUM AESTIVUM L. EMEND FIORI PAOL
Triticum aestivum L. emend. Fiori et Paol.
Triticum aestivum L. emend. Fiori et Paol. [T. aestivum L. ssp. vulgare (Vill., Host) Mac Kay]
Triticum aestivum L. emend. Fiori et Paol. [T. aestivum L. ssp. vulgare (Vill., Host) Mac Kay]
Triticum aestivum L. emend. Fiori et Paol. [T. aestivum L. ssp. vulgare (Vill.,Host) Mac Kay]
TRITICUM AESTIVUM L. EMEND. FIORI ET PAOLO
Triticum aestivum L. emend.Fiori et Paol.
Triticum aestivum L.emend.Fiori et Paol.

[End of Annex IV and of document]