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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

**TECHNICAL WORKING PARTY
FOR
AGRICULTURAL CROPS**

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UPOV INFORMATION DATABASES

Document prepared by the Office of the Union

1. The purpose of this document is to provide an update on developments concerning the GENIE database (GENIE), the UPOV Code System, and the Plant Variety Database (UPOV-ROM).

Abbreviations

CAJ:	Administrative and Legal Committee
TC:	Technical Committee
TC-EDC:	Enlarged Editorial Committee
TWP:	Technical Working Party
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
WG-PVD:	<i>Ad hoc</i> Working Group on the Publication of Variety Descriptions
WG-VD:	<i>Ad hoc</i> Working Group on Variety Denominations

GENIE

2. It is recalled that GENIE is being developed to provide, for example, online information on the status of protection (see document C/38/6), cooperation in examination (see document C/38/5), experience in DUS testing (see document TC/41/4), and existence of UPOV Test Guidelines (see document TC/41/2) for different GENera and specIEs (hence GENIE), and will also be used to generate the relevant Council and TC documents concerning that information. In addition, GENIE is the repository of the UPOV codes and will be used to provide the botanical names, common names and variety denomination class for the purposes of the Plant Variety Database.

3. The prototype GENIE in Microsoft Access format has now been populated with all available UPOV codes and corresponding information relating to the documents mentioned above. Initially, the intention was to launch GENIE on the UPOV website at this stage. However, because there are so many types of information contained within GENIE, it has become apparent that the design of the user interface (e.g. site navigation, query options, printable reports, downloads, etc.) is very important for its usability. It was also recognized that it would be very difficult to make any further modifications once the web-based version of GENIE has been designed and implemented. Therefore, an advanced prototype, mimicking a web-based version, is being evaluated by the Office of the Union (hereinafter referred to as the "Office") for its suitability in response to requests for information received by the Office, before a commitment is made to the design of the web-based version. That prototype was demonstrated at the forty-first session of the Technical Committee (TC), held in Geneva, from April 4 to 6, 2005, and at the fifty-first session of the Administrative and Legal Committee (CAJ), held in Geneva on April 7, 2005.

4. In response to a question raised at the forty-first session of TC, the Office has confirmed that the GENIE database could be expanded to include other languages, in addition to the UPOV languages. However, it was explained that it could not make any commitment with regard to the resources which would be necessary for such a development.

UPOV CODE SYSTEM

5. The TC, at its fortieth session held in Geneva from March 29 to 31, 2004, agreed to the inclusion of UPOV codes in GENIE on the basis of document TC/40/6-CAJ/49/4. However, the TC noted that there were certain codes which required checking before their inclusion and that further consideration of coding of intergeneric and interspecific hybrids and "multiple ranked names" was required before the completion of GENIE could be achieved. The developments with regard to those and other aspects of the UPOV Code System are explained below.

Intergeneric and Interspecific Hybrids

6. The TC, at its forty-first session, agreed the following approach to address hybrid genera and species: A new genus (or species) formed as a hybrid between other genera (or species) will be given a new UPOV code. However, in the web-based version of the Plant Variety Database, a link will be made between the parent genera (or species) and the new

hybrid. Thus, when searching, it will be possible to search on a UPOV code, but to automatically receive the results on all related codes:

Example: Hybrid genus formed between *Satureja* L. and *Hesperozygis* Epling.

<u>Genus</u>	<u>UPOV Code</u>
<i>Satureja</i> L.	SATUR (linked to SAHSP)
<i>Hesperozygis</i> Epling.	HSPRZ (linked to SAHSP)
<i>Satureja</i> L. x <i>Hesperozygis</i> Epling.	SAHSP (linked to SATUR and HSPRZ)

A search on “SATUR” (*Satureja* L.) would automatically provide all varieties of *Satureja* L. and the hybrid genus *Satureja* L. x *Hesperozygis* Epling. A search on “HSPRZ” (*Hesperozygis* Epling.) would automatically provide all varieties of *Hesperozygis* Epling. and the hybrid genus *Satureja* L. x *Hesperozygis* Epling. A search on “SAHSP” (*Satureja* L. x *Hesperozygis* Epling.) would provide all varieties of *Satureja* L., *Hesperozygis* Epling. and the hybrid genus *Satureja* L. x *Hesperozygis* Epling. It should be noted that, because the hybrid genus (*Satureja* L. x *Hesperozygis* Epling.) is treated as a new genus, *Satureja* L., *Hesperozygis* Epling. and *Satureja* L. x *Hesperozygis* Epling. are all placed in different variety denomination classes under the general rule of one genus, one class.

7. Annex I to this document provides an example of how the information on linked codes is presented in a report generated from GENIE. The relationship is shown as “parent” (e.g. SATUR and HSPRZ above) and “hybrid” (e.g. SAHSP above). It should be noted that the UPOV codes currently distinguish between two hybrids produced using the same parents, but with the male and female parents reversed, e.g.:

PRUNU_☐DPE☐: Prunus davidiana (PRUNU_☐DAV☐) x Prunus persica (PRUNU_☐PER☐)

PRUNU_☐PDA☐: Prunus persica (PRUNU_☐PER☐) x Prunus davidiana (PRUNU_☐DAV☐).

However, in the example above, both PRUNU_DPE and PRUNU_PDA are linked to PRUNU_DAV and PRUNU_PER.

8. Linkages are only used for “hybrids” which are not taxonomically recognized as genera or species in their own right. Thus, *Agrotriticum* is a “hybrid” between *Agropyron* and *Triticum*, but it is botanically recognized and, therefore, no linkages are made for these codes.

9. It should be noted that the facility for using linked codes can be incorporated into the web-based version of the Plant Variety Database, but it will not be possible for such linkages to be incorporated into the current CD-ROM version.

Multiple-Ranked Names: Brassica and Beta

10. In accordance with the approach reported to the Technical Working Parties in 2004, the Office, in conjunction with the chairmen of the TC, the TWA and the TWV, developed a proposal for UPOV codes in *Beta* and *Brassica* which was agreed by the TC at its forty-first session. In that approach, the codes are based on a grouping classification for part of the *Beta* and *Brassica* genera. Thus, a grouping classification will be used for codes within *Beta vulgaris* and part of *Brassica oleracea*. To indicate that a grouping classification is being

used for those two species, the first letter of the third element of the code will start with “G”. A summary of the structuring of the species is presented below:

<i>UPOV CODE</i>	<i>BOTANICAL NAME</i>	<i>COMMON NAME</i>
BETAA_VUL	Beta vulgaris L.	
BETAA_VUL_GV	Beta vulgaris L. ssp. vulgaris	Beet
BETAA_VUL_GVA	Beta vulgaris L. ssp. vulgaris var. alba DC.	Fodder beet
BETAA_VUL_GVC	Beta vulgaris L. ssp. vulgaris var. conditiva Alef.	Beetroot
BETAA_VUL_GVF	Beta vulgaris L. ssp. vulgaris var. flavescens DC.	Leaf beet
BETAA_VUL_GVS	Beta vulgaris L. ssp. vulgaris var. saccharifera Alef.	Sugar beet
BRASS_OLE_GA	Brassica oleracea L. convar. acephala (DC.) Alef.	Kale
BRASS_OLE_GAM	Brassica oleracea L. convar. acephala (DC.) Alef. var. medullosa Thell.	Marrow-stem kale
BRASS_OLE_GAR	Brassica oleracea L. var. ramosa DC.	Catjang
BRASS_OLE_GAS	Brassica oleracea L. convar. acephala (DC.) Alef. var. sabellica L.	Curly kale
BRASS_OLE_GAV	Brassica oleracea L. convar. acephala (DC.) Alef. var. viridis L.	Fodder kale
BRASS_OLE_GB	Brassica oleracea L. convar. botrytis (L.) Alef.	
BRASS_OLE_GBB	Brassica oleracea L. convar. botrytis (L.) Alef. var. botrytis	Cauliflower
BRASS_OLE_GBC	Brassica oleracea L. convar. botrytis (L.) Alef. var. cymosa Duch.	Broccoli
BRASS_OLE_GC	Brassica oleracea L. convar. capitata (L.) Alef. var. capitata (L.) Alef.	Cabbage
BRASS_OLE_GCA	Brassica oleracea L. convar. capitata (L.) Alef. var. capitata L. f. alba DC.	White cabbage
BRASS_OLE_GCR	Brassica oleracea L. convar. capitata (L.) Alef. var. capitata L. f. rubra (L.) Thell.	Red cabbage
BRASS_OLE_GCS	Brassica oleracea L. convar. capitata (L.) Alef. var. sabauda L.	Savoy cabbage
BRASS_OLE_GGM	Brassica oleracea L. convar. oleracea var. gemmifera DC.	Brussels sprout
BRASS_OLE_GGO	Brassica oleracea L. convar. acephala (DC.) Alef. var. gongylodes L.	Kohlrabi

Variety types

11. While developing GENIE, it became apparent that it may be useful to be able to identify types within a genus or species. Thus, for example, in the case of apple there are separate Test Guidelines for fruit varieties (TG/14), for rootstock varieties (TG/163) and for ornamental varieties (TG/192). Also, when providing information for the “List of species in which practical knowledge has been acquired or for which national test guidelines have been established” (see document TC/41/4), authorities have sometimes indicated that their experience only relates to certain types of variety. The basis of the UPOV code is a “vertical” botanical classification and, therefore, the UPOV code is limited in its scope to differentiate, in a “horizontal” way, types of variety (e.g. fruit varieties and ornamental varieties) which have a different botanical classification. However, it is possible to provide notes indicating this additional information and it would also be possible within GENIE to identify such “types” within a code. Thus, if types are created within a UPOV code within GENIE, it would be possible to search “MALUS” for all information related to apple, but also to refine the search, for example for all information which is specifically indicated as relating to fruit varieties only. That facility could also be incorporated into the web-based version of the Plant Variety Database, although it will not be possible for it to be incorporated into the current CD-ROM version.

Use of UPOV Codes when contributing data to Plant Variety Database (UPOV-ROM)

12. The TC agreed, at its fortieth session, that members of the Union and other contributors should be encouraged to start to use the UPOV codes when contributing data to the UPOV-ROM as soon as GENIE was made available on the UPOV website and agreed that, in the first instance, such use would be optional.

13. As explained in paragraph 3, a prototype GENIE has been developed and is being used by the Office, but it is not envisaged that it will be launched on the UPOV website before the end of 2005. However, the necessary information on UPOV codes is already available and a test-run has been undertaken with the Community Plant Variety Office (CPVO) as a part of the cooperation in the development and maintenance of the UPOV web-based Plant Variety Database and the CPVO Centralized Database on Variety Denominations (CPVO database).

14. The TC, at its forty-first session, and the CAJ, at its fifty-first session, agreed that the UPOV codes, together with their relevant botanical and common names, variety denomination class and any linked hybrid/parent UPOV codes, as contained in the GENIE database, should be published on the first restricted area of the UPOV website for use by contributors to the UPOV-ROM. The information will be published in the form of downloadable Excel spreadsheets, similar to the following tables:

Spreadsheet 1: UPOV code list (one line per UPOV code)

<i>UPOV code</i>	<i>Principal Botanical Name</i>	<i>Variety Denomination Class</i>
ABELI	Abelia R. Br.	ABELI
ABELI_GRA	Abelia x grandiflora Rehder	ABELI
ABELM	Abelmoschus	ABELM
ABELM_ESC	Abelmoschus esculentus (L.) Moench	ABELM
ABIES	Abies Mill.	Class 19
ABIES_ALB	Abies alba Mill.	Class 19
etc.		

Spreadsheet 2: Full list of names by UPOV code

<i>UPOV code</i>	<i>Language</i>	<i>Name</i>
ABELI	Latin	Abelia R. Br.
ABELI	English	Abelia
ABELI	French	Abelia
ABELI	German	Abelia
ABELI	Spanish	Abelia
ABELI_GRA	Latin	Abelia x grandiflora Rehder
ABELM	Latin	Abelmoschus
ABELM_ESC	Latin	Abelmoschus esculentus (L.) Moench
ABELM_ESC	Latin	Hibiscus esculentus L.
ABELM_ESC	English	Gombo
ABELM_ESC	French	Ambrette
ABELM_ESC	German	Okra
ABELM_ESC	Spanish	Okra
etc.		

Spreadsheet 3: Hybrid and linked codes

<i>Hybrid UPOV Code</i>	<i>Parent UPOV Code</i>
AMARA_HCR	AMARA_CRU
AMARA_HCR	AMARA_HYP
BORON_HME	BORON_HET
BORON_HME	BORON_MEG
BRCHY_ACU	BRCHY_ASC
BRCHY_ACU	BRCHY_CUR
etc.	

15. The spreadsheets will be updated on a regular basis, with notification of the updating being sent by e-mail to all UPOV-ROM contributors, and a summary of changes to the previous versions also being provided in the form of an Excel spreadsheet.

16. In addition to the spreadsheets above, which are intended to provide data in a manageable form for downloading into a database, two consolidated reports obtained from GENIE will be presented in 'pdf' format for general reference. Examples of extracts of those reports are presented as Annexes II and III. Annex II is an example of a report produced in UPOV code order providing information on the UPOV codes and their associated botanical and common names and variety denomination class. Annex III presents the genera and species within GENIE listed by variety denomination class.

17. In order to facilitate the use of UPOV codes by contributors to the UPOV-ROM, it was agreed that the Office should explain to members of the Union and other contributors the way in which the UPOV codes will be made available and how to incorporate them into their UPOV-ROM data. It was recognized that some contributors may wish to receive assistance in the process of introducing UPOV codes for their UPOV-ROM data. The Office is currently assessing two possible forms of assistance:

(a) Initial assistance

At the point at which a contributor indicates their intention to start using the UPOV code in their UPOV-ROM data, the Office would take the most recent batch of data provided by the contributor concerned (initial batch) and return that data to the contributor with the relevant UPOV codes. For future submissions, the contributor would only have to identify the UPOV codes for genera and species not already provided with a code in the initial batch.

(b) Full assistance

The contributor would continue submitting data without the UPOV code. The Office would attribute all the relevant UPOV codes on receiving the data.

18. The scope for the Office to provide the type of assistance set out above will depend on the number of contributors requesting such assistance and the possibility to automate the allocation of UPOV codes to genera and species. In that respect, the Community Plant Variety Office (CPVO) is developing a tool for the automation of UPOV code allocation and has agreed to share that tool with the Office and members of the Union. Once available, such a tool would be made available on the UPOV website.

Checking of Codes

19. Subsequent to the checking of UPOV codes by the TC and TWPs in 2004, there has been a need to introduce some new codes and also to amend certain codes. In accordance with the procedure for the introduction and amendment of codes as agreed by the TC at its fortieth session, reproduced as Annex IV to this document, the relevant codes to be checked by the TWA are listed in Annex V.

20. Annex V contains three parts: Part A provides an explanation of the information provided and some guidance on how to check the code amendments. Part B provides a table of amendments which all experts are requested to check. Part C provides for relevant individual authority experts the UPOV codes and information they are specifically requested to check. The basis for including the codes in Part B or Part C is explained below.

21. The Office will notify all checking experts when the necessary updated reports have been posted on the website in order that the checking of codes can begin.

22. In order to clarify the situation for the checking of UPOV codes for the future the Office would like, in conjunction with the Technical Working Parties, to develop some guiding criteria to be approved by the TC. Those criteria might be:

(a) *Checking TWP(s)*

The Office to determine the relevant Technical Working Party(ies) for checking each UPOV code on the basis of available information.

(b) *Checking by all authority(ies) (Part B of Annex V)*

All the experts of the relevant TWP(s) to be invited to check the UPOV codes where:

(i) many authorities (e.g. 10 or more) have experience in DUS testing (based on GENIE database / document TC/41/4), have provided interested experts in the drafting of relevant Test Guidelines and/or have protected varieties (based on Plant Variety Database (UPOV-ROM)); or

(ii) they concern genera or species for which a wide review is considered appropriate by the Office (e.g. because it concerns a proposal for a species or sub-species not previously recognized within the genus, or a proposal for restructuring of the UPOV code).

(c) *Checking by specific authority(ies) (Part C of Annex V)*

In cases not covered by (b) above, the experts of the relevant TWP(s) of specific authorities to be invited to check the UPOV codes. The specific authorities being those which have practical DUS testing experience, have provided interested experts in the drafting of relevant Test Guidelines, or which have granted protection for varieties covered by the relevant UPOV code.

PLANT VARIETY DATABASE

23. As explained in document TWA/33/3, a factor which was taken into account in the program to improve the Plant Variety Database was the project for a centralized database on variety denominations being undertaken by the CPVO. That project is intended to develop a web-based database for variety denomination examination purposes, but relies on a database of information which will be essentially the same as that of the UPOV Plant Variety Database. It was recognized that there would be mutual benefit if both parties cooperated in the work and a Memorandum of Understanding for cooperation in the development and maintenance of a UPOV web-based Plant Variety Database and the CPVO database in a way which would minimize the overall cost of development of software and maintenance of data, maximize the completeness of the UPOV and CPVO databases, and secure compatibility of both databases, was signed in October 2004. Some of the key aspects of the Memorandum of Understanding were presented in document TWA/33/3.

24. The TC, at its fortieth session, and the CAJ, at its forty-ninth session, agreed that, in the light of developments concerning a web-based Plant Variety Database, the short-term improvements initially planned for the UPOV-ROM should not be pursued. However, it was agreed that training for the purposes of contributing data to the Plant Variety Database and for its use should go ahead. The Office explained that the UPOV-ROM would continue to be produced on the current basis and would not be discontinued without further consultation.

25. In response to the discussions at the fortieth session of the TC and forty-ninth session of the CAJ and, in particular, the wish that the Plant Variety Database should continue to be produced in its current UPOV-ROM format for the foreseeable future, even if a web-based version is developed alongside, the Office has reviewed its planned program. Instead of focussing work on the development of the new web-based media, priority is now being focussed on improvements which can equally be realized in the UPOV-ROM format, namely:

(a) introduction of the UPOV code: proposals are set out in paragraphs 12-18 above;

(b) improving the ease of contributing data to the UPOV-ROM: the Office is developing a data submission table which will provide all the necessary information for the UPOV-ROM and which will not require contributors themselves to convert their data into the TAG format. As soon as that table is finalized, contributors will be informed and the table will be provided on the first restricted area of the UPOV website;

(c) providing training in the use of the UPOV-ROM: Information on the use of the UPOV-ROM and how to contribute data is now being included in the Workshop on Data Handling, which is occasionally offered in conjunction with the TWC sessions. A copy of the lecture provided at the workshop held in Beijing from June 9 to 11, 2004, can be found on the UPOV website at: http://www.upov.int/en/publications/pdf/upov_data_bei_04_11.pdf.

26. The schedule for the development of an initial prototype of the web-based Plant Variety Database will depend on the resources needed to advance the three priorities set out above. In particular, the level of assistance needed for contributors in relation to the introduction of the UPOV code will determine how quickly it will be possible to start working on the web-based Plant Variety Database. If possible, a prototype will be presented at the forty-second session of the TC and the fifty-third session of the CAJ, together with proposals concerning the fields to be included and proposals for which fields might be considered to be mandatory, as requested by the TC at its fortieth session. The frequency of updating of the web-based Plant

Variety Database will be considered in conjunction with the presentation of the prototype together with consideration of the establishment of links to relevant websites for variety denomination checking purposes. In relation to the possibilities for manual inputting of data from printed gazettes, the TC has noted that improving the ease of contributing data, through the possibility of submitting data in a table format, is likely to increase the number of countries contributing data and that it will be appropriate to assess the need for manual input of data at a later stage.

27. Following notification from the Office of the posting of the necessary updated reports on the UPOV website, experts from the relevant authorities are invited to check the amendments to UPOV codes in GENIE, as set out in Annex V (see paragraphs 20 and 21);

[Annex I follows]

EXTRACT**UPOV : GENIE Application**
List of UPOV codes with hybrid links

UPOV Code:	Hybrid:	Parent:	Botanical name:	English:	French:	German:	Spanish:
AGROS_CAN	AGROS_SCA		+ * <i>Agrostis canina</i> L.	Velvet Bent	<i>Agrostis des chiens</i>	Hundsstraußgras	Agróstide canina Agróstide de perro Agróstide perruna
AGROS_SCA		AGROS_CAN AGROS_STO	+ <i>Agrostis stolonifera</i> L. x <i>A. canina</i> L.				
AGROS_STO	AGROS_SCA		+ * <i>Agrostis stolonifera</i> L. <i>Agrostis palustris</i> Huds.	Creeping Bent	<i>Agrostide blanche</i> <i>Agrostide stolonifère</i>	FlechtstrauRgras	Agróstide estolonifera
AMARA_CRU	AMARA_HCR		+ * <i>Amaranthus cruentus</i> L. <i>Amaranthus paniculatus</i> L.	Slim Amaranth	<i>Amarante paniculée</i>	Bastardfuchsschwanz	Achita Moco de pavo
AMARA_HCR		AMARA_CRU AMARA_HYP	+ <i>Amaranthus hypocondriacus</i> L. x <i>Amaranthus cruentus</i> L.				
AMARA_HYP	AMARA_HCR		+ <i>Amaranthus hypocondriacus</i> L.	Prince's-feather		Trauer-Fuchsschwanz	Alegria
BORON_HET	BORON_HME		+ <i>Boronia heterophylla</i> F. Muell.	Red Boronia			
BORON_HME		BORON_HET BORON_MEG	+ <i>Boronia heterophylla</i> x <i>Boronia megastigma</i>				
BORON_MEG	BORON_HME		+ <i>Boronia megastigma</i> Nees ex Bartl.	Brown boraria Scented boraria Sweet boraria			Boronia
BRASS_RAP	RAPBR_SRA		+ * <i>Brassica rapa</i> L.				
BRCHY_ACU		BRCHY_ASC BRCHY_CUR	+ <i>Brachyscome ascendens</i> x <i>curvicarpa</i>				

[Annex II follows]

EXTRACT

UPOV : GENIE Application
List of UPOV codes (including variety denomination class)

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UPOV Code:	Variety Denomination Class:	Botanical name:	English:	French:	German:	Spanish:
ABELI	ABELI	+ Abelia R. Br.	Abelia	Abelia	Abelia	Abelia
ABELI_GRA	ABELI	+ Abelia x grandiflora Rehder				
ABELM	ABELM	+ Abelmoschus				
ABELM_ESC	ABELM	+ * Abelmoschus esculentus (L.) Moench Hibiscus esculentus L.	Gombo	Ambrette	Okra	Okra
ABIES	Class 19	+ * Abies Mill.	Fir	Sapin	Tanne	Abeto
ABIES_ALB	Class 19	+ * Abies alba Mill.				
ABIES_AMA	Class 19	+ * Abies amabilis Douglas ex J. Forbes				
ABIES_BAL	Class 19	+ * Abies balsamea (L.) Mill.				
ABIES_CEP	Class 19	+ * Abies cephalonica Loudon				
ABIES_CIL	Class 19	+ * Abies cilicica (Antoine & Kotschy) Carriere				
ABIES_CON	Class 19	+ * Abies concolor (Gordon & Gland.) Lindl. ex F. H. Hildebr.				
ABIES_FIR	Class 19	+ * Abies firma Siebold & Zucc.				
ABIES_FRA	Class 19	+ * Abies fraseri (Pursh) Poir.				
ABIES_GRA	Class 19	+ * Abies grandis (Douglas ex D. Don) Lindl.				
ABIES_HOM	Class 19	+ * Abies homolepis Siebold & Zucc.				
ABIES_LAS	Class 19	+ * Abies lasiocarpa (Hook.) Nutt.				

[Annex III follows]

EXTRACT

UPOV : GENIE Application
List of UPOV codes arranged by variety denomination class

Variety Denomination Class:	UPOV Code:	Botanical Name:
[Divided]	BETAA	Beta L.
	BETAA_VUL	* Beta vulgaris L.
	BRASS	Brassica L.
	BRASS_RAP	* Brassica rapa L.
	CUCUM	Cucumis L.
	HLNTS	Helianthus L.
	LUPIN	Lupinus L.
	NICOT	Nicotiana L.
	SOLAN	Solarium L.
	VICIA	Vicia L.
Class 1	AVENA	Avena L.
	AVENA_BAR	* Avena barbata Pott ex Link
	AVENA_FAT	* Avena fatua L.
	AVENA_NUD	* Avena nuda L.
	AVENA_SAT	* Avena sativa L.
	AVENA_SAT_BYZ	Avena byzantina K. Koch
	AVENA_STR	* Avena strigosa Schreb.
	HORDE	Hordeum L.
	HORDE_JUB	* Hordeum jubatum L.
	HORDE_MUR	* Hordeum murinum L.
	HORDE_SPO	* Hordeum spontaneum K. Koch
	HORDE_VUL	Hordeum vulgare L.
	HORDE_VUL_VUL	Hordeum vulgare L. subsp. vulgare
	SECAL	Secale

[Annex IV follows]

PROCEDURE FOR THE INTRODUCTION
AND AMENDMENT OF UPOV CODES

The Technical Committee, at its fortieth session held in Geneva from March 29 to 31, 2004 (see document TC/40/10, paragraph 17), agreed to the following procedure for the introduction and amendment of codes:

(1) Responsibility for the UPOV Code System

The Office is responsible for the UPOV Code System and the individual codes.

(2) Repository of UPOV Codes

The definitive collection of UPOV codes exists exclusively in the GENIE database.

(3) Introduction of New UPOV Codes / Amendments to UPOV Codes

(a) In the first instance, the Office will draft a code on the basis of the Germplasm Resources Information Network (GRIN) database¹, or other suitable references if the species concerned are not included in the GRIN database.

(b) Where the Office is aware of relevant experts for the genus or species concerned, or is advised of such experts, for example by the proposer of a new code, it will, wherever possible, check its proposals with those experts before creating the code.

(c) New codes might be proposed by any party, but it is expected that the majority of proposals will be made by contributors to the Plant Variety Database. Where the Office receives such proposals, it will respond by updating the GENIE database with the new codes in a timely manner and, in particular, will seek to ensure that new codes are available to allow their use for the forthcoming edition of the Plant Variety Database. In addition, the Office will add new codes where it identifies a need.

(d) In general, amendments to codes will not be made as a result of taxonomic developments unless these result in a change to the genus classification of a species. The UPOV recommendations on variety denominations are based on the general principle that, unless the list of classes applies, all taxonomic units which belong to the same genus are closely related. Therefore, it is important that the first element of the code can be used to sort species into the correct genus. The codes will also be amended if there are consequences for the content of a variety denomination class where the list of classes applies. Amendments to UPOV codes will be handled by the same procedure as the introduction of new codes as in paragraphs (a) and (b), above. However, in addition, all members of the Union and contributors of data to the Plant Variety Database will be informed of any amendments.

¹ USDA, ARS, National Genetic Resources Program. *Germplasm Resources Information Network - (GRIN)* [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/tax_search.pl?

(e) New and amended codes will be presented to the relevant TWP(s) for comment at their first available session. If the TWP recommends any change, this will be treated as an amendment according to paragraph (d), above.

(4) Updating of Information Linked to UPOV Codes

(a) UPOV codes might need to be updated to take account of, for example, changes in taxonomic classification, new information on common names, etc. In the case of changes of taxonomic classification, this might, although it is emphasized that this is not necessarily the case (see section (3)(d), above), result in a need to change the UPOV code. In such cases, the procedure is as explained in section (3), above. In other cases, the Office will amend the information linked to the existing code as appropriate.

(b) The TC, the TWPs and individual communications from members and observers of these bodies will be the principal routes by which the Office will update its information.

[Annex V follows]

ANNEX V – Part A

GUIDANCE FOR CHECKING UPOV CODE AMENDMENTS
IN PARTS B AND C

The information in Parts B and C is presented in the form of amendments to previous UPOV codes or information (e.g. botanical name, common name, etc.) linked to those UPOV codes.

The Office will notify all checking experts when the necessary updated reports have been posted on the website in order that the checking of codes can begin. Following that notification, as a first step, it is recommended to refer to the summary report of information on UPOV codes “Summary report 1 (pdf): UPOV codes with names and denomination class” (an extract is provided in Annex II for illustrative purposes), which will become available on the UPOV website at http://www.upov.int/restrict/en/upov_rom_upov_code_system/index.htm, with regard to the UPOV code to be checked. For example, if the amendments relate to “ALLIU_RAM”, go to the relevant page in the summary report to see all the information linked to that code. The information in the summary report will contain the current information in GENIE **after** all the amendments which are specified in Part B or Part C have been made.

The next step is to review the amendments specified in Parts B or C and consider if they were appropriate. The following clarifies the information provided in the tables:

Checking authorities: this indicates all authorities which are invited to check that UPOV code amendment.

UPOV code: the UPOV code for which an amendment has been made.

Field name: this indicates the type of information which has been amended e.g. “GENIE name / English” means that there has been an amendment concerning the English name(s) associated with that UPOV code.

Principal botanical name: the principal botanical name is the botanical name on which the UPOV code is based e.g. the principal botanical name of LYCOP_ESC_ESC is *Lycopersicon esculentum* Mill. var. *esculentum*. Synonyms e.g. *Lycopersicon lycopersicum* (L.) H. Karst. may exist in GENIE and will be shown in the summary report of information provided on the website. The principal botanical name has been created to allow a single line print-out for each code in order to save space.

Action: the action specifies the type of modification, i.e. whether it is the “creation” of an addition to the field (e.g. new French common name), a “modification” (e.g. to correct a spelling mistake), or a “deletion”. In some cases there can be a string of actions which result in only a single change or even no change. e.g. on the basis of a proposal, a name might be modified, but then, after further comments, modified back to the original name. It is for this reason that experts are invited to check the summary report of information in order to see clearly the final outcome.

Old value: in the case of modifications and deletions this shows the entry before the modification or deletion.

The words “true” and “false” are used in some cases to identify changes. For example, the entry for CTRLS_LAN in Part B shows “False” under the OLD value for Citrullus lanatus (Thunb.) Matsum. & Nakai as the “Default name” and “True” as the NEW value. This indicates that Citrullus lanatus (Thunb.) Matsum. & Nakai was previously not the default name but has become the default name.

New value: this shows the new information after the amendment.

[Annex V – Part B follows]

ANNEX V - Part B

AMENDMENTS TO UPOV CODES TO BE CHECKED BY ALL EXPERTS

ALL AUTHORITIES

Checking Authorities	UPOV Code	Field name	Principal botanical name	Action	Old value	New value
[ALL]	FESTL_ASC	Genus code	×Festulolium ascendens (Retz.) Asch. & Graebn.	Creation		FESTL
[ALL]	FESTL_ASC	Species code	×Festulolium ascendens (Retz.) Asch. & Graebn.	Creation		ASC
[ALL]	FESTL_ASC	UPOV code	×Festulolium ascendens (Retz.) Asch. & Graebn.	Creation		FESTL_ASC
[ALL]	FESTL_ASC	Denomination class	×Festulolium ascendens (Retz.) Asch. & Graebn.	Creation		Class 4
[ALL]	FESTL_ASC	UPOV code name / Latin	×Festulolium ascendens (Retz.) Asch. & Graebn.	Creation		×Festulolium ascendens (Retz.) Asch. & Graebn.
[ALL]	FESTL_FRE	Genus code	×Festulolium fredericii Cugnac & A. Camus	Creation		FESTL
[ALL]	FESTL_FRE	Species code	×Festulolium fredericii Cugnac & A. Camus	Creation		FRE
[ALL]	FESTL_FRE	UPOV code	×Festulolium fredericii Cugnac & A. Camus	Creation		FESTL_FRE
[ALL]	FESTL_FRE	Denomination class	×Festulolium fredericii Cugnac & A. Camus	Creation		Class 4
[ALL]	FESTL_FRE	UPOV code name / Latin	×Festulolium fredericii Cugnac & A. Camus	Creation		Festuca rubra × Lolium perenne (fide F BRitStace)
[ALL]	FESTL_FRE	UPOV code name / Latin	×Festulolium fredericii Cugnac & A. Camus	Creation		×Festulolium fredericii Cugnac & A. Camus
[ALL]	FESTL_HOL	Genus code	×Festulolium holmbergii (Dörfl.) P. Fourn.	Creation		FESTL
[ALL]	FESTL_HOL	Species code	×Festulolium holmbergii (Dörfl.) P. Fourn.	Creation		HOL
[ALL]	FESTL_HOL	UPOV code	×Festulolium holmbergii (Dörfl.) P. Fourn.	Creation		FESTL_HOL
[ALL]	FESTL_HOL	Denomination class	×Festulolium holmbergii (Dörfl.) P. Fourn.	Creation		Class 4
[ALL]	FESTL_HOL	UPOV code name / Latin	×Festulolium holmbergii (Dörfl.) P. Fourn.	Creation		×Festulolium holmbergii (Dörfl.) P. Fourn.
[ALL]	FESTL_HOL	UPOV code name / Latin	×Festulolium holmbergii (Dörfl.) P. Fourn.	Creation		Festuca arundinacea × Lolium perenne

ALL AUTHORITIES

Checking Authorities	UPOV Code	Field name	Principal botanical name	Action	Old value	New value
[ALL]	FESTU_ARU_ARU	UPOV code name / Latin	<i>Festuca arundinacea</i> Schreb. subsp. <i>arundinacea</i>	Modification	<i>Festuca arundinacea</i> Schreb. subsp. <i>Arundinacea</i>	<i>Festuca arundinacea</i> Schreb. subsp. <i>arundinacea</i>
[ALL]	FESTU_ARU_ARU	UPOV code name / Latin	<i>Festuca arundinacea</i> Schreb. subsp. <i>arundinacea</i>	Creation		<i>Festuca elatior</i> subsp. <i>arundinacea</i> (Schreb.) Celak.
[ALL]	FESTU_ARU_ARU	UPOV code name / Latin	<i>Festuca arundinacea</i> Schreb. subsp. <i>arundinacea</i>	Creation		<i>Festuca elatior</i> var. <i>arundinacea</i> (Schreb.) Wimm.
[ALL]	FESTU_ARU_ARU	UPOV code name / Latin	<i>Festuca arundinacea</i> Schreb. subsp. <i>arundinacea</i>	Creation		<i>Schedonorus phoenix</i> (Scop.) Holub
[ALL]	FESTU_ARU_ARU	UPOV code name / Latin	<i>Festuca arundinacea</i> Schreb. subsp. <i>arundinacea</i>	Creation		<i>Lolium arundinaceum</i> (Schreb.) Darbysh.
[ALL]	FESTU_ARU_ARU	UPOV code name / Latin	<i>Festuca arundinacea</i> Schreb. subsp. <i>arundinacea</i>	Creation		<i>Poa phoenix</i> Scop.
[ALL]	FESTU_ARU_ARU	UPOV code name / Latin	<i>Festuca arundinacea</i> Schreb. subsp. <i>arundinacea</i>	Creation		<i>Schedonorus arundinaceus</i> (Schreb.) Dumort.
[ALL]	FESTU_OVI	UPOV code name / Latin	<i>Festuca ovina</i> L.	Modification	<i>Festuca ovina</i> L var <i>ovina</i>	<i>Festuca ovina</i> L. var. <i>ovina</i>
[ALL]	FESTU_PSO	Genus code	<i>Festuca pseudovina</i> Hack. ex Wiesb.	Creation		FESTU
[ALL]	FESTU_PSO	Species code	<i>Festuca pseudovina</i> Hack. ex Wiesb.	Creation		PSO
[ALL]	FESTU_PSO	UPOV code	<i>Festuca pseudovina</i> Hack. ex Wiesb.	Creation		FESTU_PSO
[ALL]	FESTU_PSO	Denomination class	<i>Festuca pseudovina</i> Hack. ex Wiesb.	Creation		Class 4
[ALL]	FESTU_PSO	UPOV code name / Latin	<i>Festuca pseudovina</i> Hack. ex Wiesb.	Creation		<i>Festuca pseudovina</i> Hack. ex Wiesb.
[ALL]	FESTU_PSO	UPOV code name / English	<i>Festuca pseudovina</i> Hack. ex Wiesb.	Creation		<i>pseudovina</i>
[ALL]	LOLIU_BOU	UPOV code name / Latin	<i>Lolium xboucheanum</i> Kunth	Modification	<i>Lolium x hybridum</i> Hausskn.	<i>Lolium xhybridum</i> Hausskn.
[ALL]	LOLIU_BOU	UPOV code name / Latin	<i>Lolium xboucheanum</i> Kunth	Modification	<i>Lolium x boucheanum</i> Kunth	<i>Lolium xboucheanum</i> Kunth
[ALL]	LOLIU_BOU	UPOV code name / Latin	<i>Lolium xboucheanum</i> Kunth	Modification	<i>Lolium x multifolium</i> Lam. x <i>Lolium perenne</i> L.	<i>Lolium x multifolium</i> Lam. x L. <i>perenne</i> L.
[ALL]	PISUM_SAT	UPOV code name / Latin	<i>Pisum sativum</i> L.	Modification	<i>Pisum sativum</i> L. ssp <i>sativum</i> convar <i>medullare</i>	<i>Pisum sativum</i> L. ssp <i>sativum</i> convar <i>medullare</i>

[Annex V - Part C follows]