UPOV INFORMATION DATABASES

Document prepared by the Office of the Union

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EXECUTIVE SUMMARY

1.   The purpose of this document is to report to the TC and the CAJ developments concerning the GENIE database and to invite the TC to consider proposals to amend UPOV codes.

2.   The TC is invited to consider:

(a)   the deletion of UPOV codes for 53 redundant genera in the GENIE database, as presented in paragraph 11 of this document.

(b)   the resource implications of the systematic checking and updating of botanical names in the GENIE database to follow taxonomic developments in the GRIN.

(c)   creating variety groups to the UPOV codes for *Beta vulgaris* L. ssp. *vulgaris*, as set out in paragraph 20 of this document.

(d)   the proposal to create variety groups for the UPOV codes for *Cichorium intybus*, as set out in paragraph 25 of this document.

(e)   deleting the UPOV code ZEAAA_MAY_MIC, to be replaced by the UPOV code ZEAAA_MAY_EVE;

(f)   amending the UPOV codes ZEAAA_MAY_EVE, ZEAAA_MAY_MAY and ZEAAA_MAY_SAC and associated information to establish variety groups, as set out in paragraph 30 of this document;

(g)   inviting the Office of the Union to consult contributors to the PLUTO database using UPOV code ZEAAA_MAY_MAY whether to allocate existing entries to *Zea mays* ssp. *mays* Group Maize; and

(h)   the proposal to delete and amend the UPOV Codes CLEOM_HAS, CLEOM_SPI, EPIPH_ANG, CALAT_CRO, CALAT_LOE, CALAT_ROS, CALAT_WAR, CALAT_LRO, OSTEO_ECK, OSTEO_FRU, OSTEO_ECC, CASTL_TRA BERBE_AQU, BERBE_EUR, BERBE_NIT, BERBE_PUM, BERBE_REP, DESCH_FLE, UNCIN, UNCIN_DIV, UNCIN_EGM, UNCIN_RUB and UNCIN_UNC, as set out in paragraphs 34 to 57 of this document.

3.   The structure of this document is as follows:

4.   The following abbreviations are used in this document:

CAJ: Administrative and Legal Committee
GRIN: Germplasm Resources Information Network
TC: Technical Committee
TWA: Technical Working Party for Agricultural Crops
TWF: Technical Working Party for Fruit Crops
TWM: Technical Working Party for Testing Methods and Techniques
TWO: Technical Working Party for Ornamental Plants and Forest Trees
TWP(s):   Technical Working Party(ies)
TWV: Technical Working Party for Vegetables

UPDATING BOTANICAL NOMENCLATURE OF UPOV CODES

Consideration at the Technical Working Party for Ornamental Plants and Forest Trees (TWO)

5.   The TWO, at its fifty-fifth session[1], received a presentation on "UPOV Information databases: Issues linked to UPOV codes and the update of the botanical nomenclature" by an expert from the European Union. A copy of the presentation is provided in document TWO/55/9 (see document TWO/55/11 "Report", paragraphs 31 to 36).

6.   The TWO considered the proposal to introduce a system to alert whenever a botanical name used in GENIE was updated in the Germplasm Resources Information Network (GRIN) database, as set out in document TWO/55/9. The TWO agreed to invite the Office of the Union to investigate the resource implications to develop a procedure for updating the principal botanical names of species in the GENIE database following developments in GRIN.

7.   The TWO noted the comment from the Office of the Union that document UPOV/INF/23 "Guide to the UPOV Code System" explained that amendments to UPOV codes would not be made as a result of taxonomic developments unless these would result in a change to the genus classification of a species.

8.   The TWO discussed the example provided in document TWO/55/9 of two UPOV codes for synonym genera in GRIN (STEPH, synonym of NEILL). The TWO agreed to invite the Office of the Union to delete the synonym UPOV code "STEPH" and inform data contributors to the GENIE database accordingly.

9.   The TWO received an oral report from the Office of the Union that 53 genera in GENIE had been identified with redundant UPOV codes as a result of taxonomic changes, as reproduced in the following section of this document.

10.   The TWO agreed to invite the Office of the Union to periodically check the GENIE database for the existence of redundant UPOV codes for synonym genera.

UPOV codes for redundant genera in the GENIE database

11.   The TC might wish to consider the deletion of the UPOV codes for 53 redundant genera in the GENIE database, as presented in the table below:

GENIE database		GRIN database	GENIE database	
Reclassified genera	UPOV code to be deleted	Accepted genera name	UPOV code (accepted genera in GRIN)	Relevant Technical Working Party(s)
Acanthopanax	ACNTP	*Eleutherococcus*	ELEUT	TWO
Acmena	ACMEN	*Syzygium*	SYZYG	TWO, TWF
Ajania	AJANI	*Chrysanthemum*	CHRYS	TWO
Ammophila	AMMOP	*Calamagrostis*	CALMG	TWO
Anagallis	ANAGA	*Lysimachia*	LYSIM	TWO
Belamcanda	BELAM	*Iris*	IRISS	TWO
Cardaria	CARDA	*Lepidium*	LEPID	TWO, TWV
Castalis	CASTL	*Dimorphotheca*	DIMOR	TWO
Chamaecytisus	CHMCT	*Cytisus*	CYTIS	TWO
Cheiranthus	CHEIR	*Erysimum*	ERYSI	TWO
Cimicifuga	CIMIC	*Actaea*	ACTAE	TWO
Cnicus	CNICU	*Centaurea*	CENTA	TWO
Cochlioda	COCHD	*Oncidium*	ONCID	TWO
Coluria	COLUR	*Geum*	GEUMM	TWO
Crypsis	CRYPS	*Sporobolus*	SPORO	TWO, TWA
Daemonorops	DAEMO	*Calamus*	CALAM	TWO
Dichroa	DICHR	*Hydrangea*	HYDRN	TWO
Dodecatheon	DODEC	*Primula*	PRIMU	TWO

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[1] TWO, fifty-fifth session, held via virtual means, from June 12 to 16, 2023

GENIE database		GRIN database	GENIE database	
Reclassified genera	UPOV code to be deleted	Accepted genera name	UPOV code (accepted genera in GRIN)	Relevant Technical Working Party(s)
Fortunella	FORTU	*Citrus*	CITRU	TWO, TWF
Gaura	GAURA	*Oenothera*	OENOT	TWO
Hebe	HEBEE	*Veronica*	VERON	TWO
Hemidiodia	HEMID	*Oenothera*	OENOT	TWO
Hylocereus	HYLOC	*Selenicereus*	SELEN	TWO, TWV, TWF
Laurentia	LAURE	*Lobelia*	LOBEL	TWO
Lychnis	LYCHN	*Silene*	SILEN	TWO, TWV
Manfreda	MANFR	*Agave*	AGAVE	TWO, TWV
Manglietia	MANGL	*Magnolia*	MAGNO	TWO
Menziesia	MENZI	*Rhododendron*	RHODD	TWO
Miyamayomena	MIYAM	*Aster*	ASTER	TWO
Odontoglossum	ODONT	*Oncidium*	ONCID	TWO
Parakmeria	PARAK	*Magnolia*	MAGNO	TWO
Pedilanthus	PEDIL	*Euphorbia*	EUPHO	TWO, TWV
Pennisetum	PENNI	*Cenchrus*	CENCH	TWO, TWA
Poncirus	PONCI	*Citrus*	CITRU	TWO, TWF
Porphyra	PORPH	*Callicarpa*	CALLC	TWO, TWV
Pratia	PRATI	*Lobelia*	LOBEL	TWO
Pulsatilla	PULSA	*Anemone*	ANEMO	TWO
Rhagodia	RHAGO	*Chenopodium*	CHENO	TWO, TWA
Rollinia	ROLLI	*Annona*	ANNON	TWF
Schizophragma	SCHIO	*Hydrangea*	HYDRN	TWO
Sclerostachya	SCLRS	*Miscanthus*	MISCA	TWO
Sedirea	SEDIR	*Phalaenopsis*	PHALE	TWO
Sophronitis	SOPHR	*Cattleya*	CATTL	TWO
Stephanandra	STEPH	*Neillia*	NEILL	TWO
Tacitus	TACIT	*Graptopetalum*	GRATP	TWO
Taxodiomeria	TAXDI	*Taxodium*	TAXOD	TWO
Trichloris	TRICL	*Leptochloa*	LPTOC	TWO
Uncinia	UNCIN	*Carex*	CAREX	TWO
Vaccaria	VACCA	*Gypsophila*	GYPSO	TWO
Vetiveria	VETIV	*Chrysopogon*	CHRPG	TWO
Vulpia	VULPI	*Festuca*	FESTU	TWO, TWA
Waldsteinia	WALDS	*Geum*	GEUMM	TWO
Xanthocyparis	XNTHC	*Cupressus*	CUPRE	TWO

12.   Members of the Union and contributors of data to the PLUTO database would be informed of any deletions and the date in 2024 of the deletions by means of a Circular in advance. Contributors of data to the PLUTO database would be requested to use the updated UPOV codes when submitting their plant variety data to the Office of the Union.

13.   The TC is invited to consider the deletion of UPOV codes for 53 redundant genera in the GENIE database, as presented in paragraph 11 of this document.

Updating principal botanical names of species in the GENIE database following developments in GRIN

14.   Document "Guide to the UPOV Code System" provides the following:

"4.3 (d) In general, amendments to UPOV codes will not be made as a result of taxonomic developments unless these result in a change to the genus classification of a species. […]"

15.   The change of approach to introduce systematic checking and updating of principal botanical names of species in the GENIE database to follow developments in the GRIN database would require substantial resources from the UPOV Office.

16.   It is proposed that the update of botanical names in GENIE continues to be provided in accordance with paragraph 4.3(d) of the Guide to the UPOV code system or if a particular need is identified by members.

17.   The TC is invited to consider the resource implications of the systematic checking and updating of botanical names in the GENIE database to follow taxonomic developments in the GRIN.

REPLACING COMPLEX BOTANICAL NOMENCLATURE BY VARIETY GROUPS

18.   The background to this matter is provided in document TC/58/10 "UPOV information databases".

UPOV codes for Beta vulgaris

19.   Matters concerning the creation of variety groups for the UPOV codes for *Beta vulgaris* L. ssp. *vulgaris* are provided in document SESSIONS/2023/2 "Development of guidance and documents proposed for adoption by the Council".

UPOV codes for Brassica oleracea

20.   The TWV, at its fifty-seventh session[2], agreed to propose creating variety groups for UPOV codes for *Brassica oleracea*, as set out in document TWV/57/18, Annex I, and reproduced as follows (see document TWV/57/26 "Report", paragraph 42):

UPOV code	BOTANICAL NAMES IN GENIE	BOTANICAL NAMES IN GRIN	Proposal Group name
BRASS_OLE_ALB	*Brassica oleracea* L. var. *alboglabra* (L. H. Bailey) Musil *Brassica alboglabra* L. H. Bailey; *Brassica oleracea* var. *albiflora* auct.	*Brassica oleracea* L. var. *alboglabra* (L. H. Bailey) Musil (*Brassica oleracea* Chinese Kale or Kailaan Group)	*Brassica oleracea* L. (Chinese Kale or Kailaan Group)
BRASS_OLE_COS	*Brassica oleracea* L. var. *costata* DC. *Brassica capitata* subsp. *costata* (DC.) Lizg.; *Brassica oleracea* convar. *acephala* var. *luteola* Alef.; *Brassica oleracea* subsp. *oleracea* convar. *costata* (DC.) Gladis; *Brassica oleracea* var. *tronchuda* L.H. Bailey	*Brassica oleracea* L. var. *costata* DC. (*Brassica oleracea* Portuguese Kale Group)	*Brassica oleracea* L. (Tronchuda Group)
BRASS_OLE_~~COS~~ GA	*Brassica oleracea* L. convar. *acephala* (DC.) Alef.	*Brassica oleracea* L. var. *sabellica* L. (*Brassica oleracea* Kale Group)	*Brassica oleracea* L. (Kale Group)
BRASS_OLE_GAM	*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *medullosa* Thell. *Brassica oleracea* L. var. *medullosa* Thell.	*Brassica oleracea* L. var. *medullosa* Thell. (*Brassica oleracea* Marrowstem Kale Group)	*Brassica oleracea* L. (Marrowstem Kale Group)
BRASS_OLE_GAR	*Brassica oleracea* L. var. *ramosa* DC.	*Brassica oleracea* L. var. *ramosa* DC. (*Brassica oleracea* Thousand Head Kale Group)	*Brassica oleracea* L. (Thousand Head Kale Group)
BRASS_OLE_GAS	*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *sabellica* L. *Brassica oleracea* L. var. *sabellica* L.	*Brassica oleracea* L. var. *sabellica* L. (*Brassica oleracea* Acephala Group)	*Brassica oleracea* L. (Curly kale Group)
BRASS_OLE_GBB	*Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *viridis* L. *Brassica oleracea* L. var. *viridis* L.	*Brassica oleracea* L. var. *viridis* L. (*Brassica oleracea* Collard Group)	*Brassica oleracea* L. (Collard Group)
BRASS_OLE_GBC	*Brassica oleracea* L. var. *italica* Plenck *Brassica oleracea* L. var. *botrytis* L. subvar. *cymosa* Duchesne; *Brassica oleracea* L. var. *cymosa* (Duchesne) DC.; *Brassica oleracea* subvar. *cymosa* Duchesne	*Brassica oleracea* L. var. *italica* Plenck (*Brassica oleracea* Broccoli Group)	*Brassica oleracea* L. (Broccoli Group)
BRASS_OLE_GC	*Brassica oleracea* L. convar. *capitata* (L.) Alef. *Brassica oleracea* L. convar. *capitata* (L.) Alef. var. *alba* DC. x *Brassica oleracea* L. convar.	*Brassica oleracea* L. var. *capitata* L. (*Brassica oleracea* Red	*Brassica oleracea* L. (Cabbage Group)

[2] TWV, fifty-seventh session, held at Antalya, Türkiye, from May 1 to 5, 2023

	capitata (L.) Alef. var. *rubra* (L.) Thell.; *Brassica oleracea* L. convar. *capitata* (L.) Alef. var. *capitata* (L.) Alef.; *Brassica oleracea* L. var. *capitata* L.	Cabbage and White/Green Cabbage Groups)	
BRASS_OLE_GCA	*Brassica oleracea* L. convar. *capitata* (L.) Alef. var. alba DC. *Brassica oleracea* L. convar. *capitata* (L.) Alef. var. *capitata* L. f. alba DC.	*Brassica oleracea* L. var. *capitata* L. (*Brassica oleracea* White Cabbage Group)	*Brassica oleracea* L. (White Cabbage Group)
BRASS_OLE_GCR	*Brassica oleracea* L. convar. *capitata* (L.) Alef. var. *rubra* (L.) Thell. *Brassica oleracea* L. convar. *capitata* (L.) Alef. var. *capitata* L. f. *rubra* (L.) Thell.	*Brassica oleracea* L. var. *capitata* L. (*Brassica oleracea* Red Cabbage Group)	*Brassica oleracea* L. (Red Cabbage Group)
BRASS_OLE_GCS	*Brassica oleracea* L. convar. *capitata* (L.) Alef. var. *sabauda* L. *Brassica oleracea* L. convar. *capitata* (L.) Alef. var. *bullata* DC.	*Brassica oleracea* L. var. sabauda L. (*Brassica oleracea* Savoy Cabbage Group)	*Brassica oleracea* L. (Savoy Cabbage Group)
BRASS_OLE_GGM	*Brassica oleracea* L. var. *gemmifera* Zenker *Brassica oleracea* L. convar. *oleracea* var. *gemmifera* DC.; *Brassica subspontanea* lizg	*Brassica oleracea* L. var. *gemmifera* DC. (*Brassica oleracea* Brussels Sprouts Group)	*Brassica oleracea* L. (Brussels Sprouts Group)
BRASS_OLE_GGO	*Brassica oleracea* L. var. *gongylodes* L. *Brassica caulorapa* (DC.) Pasq.; *Brassica oleracea* L. convar. *acephala* (DC.) Alef. var. *gongylodes* L.; *Brassica oleracea* var. *caulorapa* DC.	*Brassica oleracea* L. var. *gongylodes* L. (*Brassica oleracea* Kohlrabi Group)	*Brassica oleracea* L. (Kohlrabi Group)
BRASS_OLE_PAL	*Brassica oleracea* L. var. *palmifolia* DC.	*Brassica oleracea* L. var. *palmifolia* DC. (*Brassica oleracea* Jersey Kale or Palmtree Kale Group)	*Brassica oleracea* L. (Palm Kale Group)

21.   The TWV, at its fifty-seventh session[3], agreed to propose two new appended elements indicating variety groups "Tronchuda" (1TRON) and "Kale" (2KAL), to be used with UPOV Code BRAS_OLE_COS (see document TWV/57/26 "Report", paragraph 42). Following the fifty-seventh session of the TWV, the Office of the Union was requested by the drafter of the proposal, Ms. Marian van Leeuwen (Netherlands), to correct the repeated mention to UPOV code "BRASS_OLE_COS" in the third line of the table to read "BRASS_OLE_GA". The change proposed is indicated with highlighting and <u>underline</u> for addition and highlighting and ~~strikethrough~~ for deletion). This correction addresses the proposal from the TWV to separately identify the "Tronchuda Group" (BRAS_OLE_COS) and "Kale Group" (BRAS_OLE_GA). In this regard, the proposal for new elements to be appended to UPOV code BRAS_OLE_COS would no longer be applicable.

> *22.   The TC is invited to consider creating variety groups to the UPOV codes for* Beta vulgaris *L. ssp.* vulgaris*, as set out in paragraph 20 of this document.*

UPOV codes for *Cichorium intybus*

23.   The TWV, at its fifty-seventh session[3], agreed to propose the creation of four variety groups for *Cichorium intybus*: "Witloof Chicory"; "Leaf Chicory"; "Industrial Chicory"; and "Forage Chicory" (see document TWV/57/26 "Report", paragraphs 43 to 47).

24.   The TWV agreed to propose two new appended elements to be used with the UPOV Code "CICHO_INT" to indicate "Witloof Group" (1WIT) and "Forage Chicory" (2FOR).

25.   The TWV agreed to propose amending the common names in GENIE to read as follows:

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[3] TWV, fifty-seventh session, held at Antalya, Türkiye, from May 1 to 5, 2023

UPOV code	Botanical names in GENIE	GRIN	Proposed Group name	English	French	German	Spanish
CICHO_INT_1WIT	*Cichorium intybus* L.	*Cichorium intybus* L.	Witloof Chicory Group	Witloof chicory	Endive	Chicorée	Endivia
CICHO_INT_FOL	*Cichorium intybus* L. var. *foliosum* Hegi	*Cichorium intybus* L.	Leaf Chicory Group	Salad Chicory; Leaf chicory	Chicorée à feuille; Chicorée italienne	Salatzichorie	Achicoria
CICHO_INT_SAT	*Cichorium intybus* L. var. *sativum* DC.	*Cichorium intybus* L.	Industrial Chicory Group	Industrial Chicory; Large-rooted Chicory	Chicorée à café	Wurzelzichorie	Achicoria de café
CICHO_INT_2FOR	*Cichorium intybus* L.	*Cichorium intybus* L.	Forage Chicory Group	Forage Chicory	Chicorée fourrage	Futterzichorie	Achicoria forrajera

26.   The TWV agreed to propose inviting contributors to the PLUTO database to consider updating the UPOV code used for varieties previously reported as CICHO_INT using the UPOV codes associated with the proposed variety groups.

27.   The TC is invited to consider the proposal to create variety groups for the UPOV codes for Cichorium intybus*, as set out in paragraph 25 of this document.*

UPOV codes for Zea mays

28.   Sweet Corn (UPOV Code: ZEAAA_MAY_SAC) and Popcorn (UPOV Codes: ZEAAA_MAY_EVE; and ZEAAA_MAY_MIC) have been reclassified as synonyms of *Zea mays* subsp. *mays* (UPOV Code: ZEAAA_MAY_MAY), which also encompasses Maize (Corn).

29.   At their sessions in 2023, the TWV and TWA agreed to create variety groups for the UPOV code ZEAAA_MAY_MAY replacing infra-specific botanical names, as follows (see documents TWV/57/26 "Report", paragraph 49; and TWA/52/11 "Report", paragraph 33):

Principal botanical name	Other botanical name(s)	Variety groups	Proposed UPOV code with group information
Zea mays L. subsp. *mays*	*Zea mays* var *ceratina* L.; *Zea mays* var. *indentata* (Sturtev.) L. H. Bailey; *Zea mays* var. *indurata* (Sturtev.) L. H. Bailey;	Corn; Maize: "1MA"	ZEAAA_MAY_**GMA**
	Zea mays var. *saccharata* (Sturtev.) L. H. Bailey; *Zea mays* L. *saccharata* Koern.;	Sweet Corn: "2SW"	ZEAAA_MAY_**GSW**
	Zea mays L. var. *everta* (Praecox) Sturt.; *Zea mays* L. convar. *microsperma* Koern.	Popcorn: "3PO"	ZEAAA_MAY_**GPO**

30.   The following table provides information on the current UPOV codes and principal botanical names in the GENIE database for "*Zea mays* L." and relevant subspecies; the taxa in the Germplasm Resources Information Network (GRIN); and the numbers of entries in the PLUTO database:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Numbers of Entries in PLUTO
ZEAAA_MAY	*Zea mays* L.	*Zea mays* L.	Corn; Maize	164.900
ZEAAA_MAY_EVE	*Zea mays* L. var. *everta* (Praecox) Sturt.	*Zea mays* L. var. *everta* (Praecox) Sturt. (as a synonym of *Zea mays* L. subsp. *mays*) is not recognized in GRIN	Popcorn	87
ZEAAA_MAY_MAY	*Zea mays* L. subsp. *mays*	*Zea mays* L. subsp. *mays*	corn; maize; sweet corn etc.	780
ZEAAA_MAY_MIC	*Zea mays* L. convar. *microsperma* Koern.	*Zea mays* L. convar. *microsperma* Koern. (as a synonym of *Zea mays* L. subsp. *mays*) is not recognized in GRIN	Popcorn	187
ZEAAA_MAY_SAC	*Zea mays* L. *saccharata* Koern.	*Zea mays* L. var. *saccharata* (Sturtev.) L. H. Bailey (synonym of *Zea mays* L. subsp. *mays*)	Sweet Corn	1.953

31.   Following the proposal from the TWV and TWA, the following changes to UPOV codes are proposed:

Current			Proposal			
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)	Note
ZEAAA_MAY_EVE	*Zea mays* L. var. *everta* (Praecox) Sturt.	n.a.	ZEAAA_MAY_**GPO**	<u>*Zea mays* L. subsp. *mays* Popcorn Group</u>	*Zea mays* L. var. *everta* (Praecox) Sturt.; *Zea mays* L. convar. *microsperma* Koern.	Addition of new synonym previously under ZEAAA_MAY_MIC
ZEAAA_MAY_MIC	*Zea mays* L. convar. *microsperma* Koern.	n.a.	[to delete]	n.a.	n.a.	Principal botanical name added as other botanical name under *Z. mays* L. subsp. *mays* Popcorn Group
ZEAAA_MAY_SAC	*Zea mays* L. *saccharata* Koern.	n.a.	ZEAAA_MAY_**GSW**	<u>*Zea mays* L. subsp. *mays* Sweet Corn Group</u>	*Zea mays* var. *saccharata* (Sturtev.) L. H. Bailey; *Zea mays* L. *saccharata* Koern.	
ZEAAA_MAY_MAY	*Zea mays* L. subsp. *mays*	*Zea mays* var *ceratina* L.; *Zea mays* var. *indentata* (Sturtev.) L. H. Bailey; *Zea mays* var. *indurata* (Sturtev.) L. H. Bailey; *Zea mays* var. *saccharata* (Sturtev.) L. H. Bailey	ZEAAA_MAY_**GMA**	<u>*Zea mays* L. subsp. *mays* Maize Group</u>	*Zea mays* var *ceratina* L.; *Zea mays* var. *indentata* (Sturtev.) L. H. Bailey; *Zea mays* var. *indurata* (Sturtev.) L. H. Bailey; ~~*Zea mays* var. *saccharata* (Sturtev.) L. H. Bailey;~~ ~~*Zea mays* L. *saccharata* Koern.;~~ ~~*Zea mays* L. var. *everta* (Praecox) Sturt.;~~ ~~*Zea mays* L. convar. *microsperma* Koern.~~	Reduction of scope to delete Sweet Corn and Popcorn

32.   It should be noted that the scope of the UPOV code ZEAAA_MAY_MAY would be reduced to cover only Maize and no longer Sweet Corn and Popcorn. The TC may wish to consider inviting the Office of the Union to inform the eight contributors to the PLUTO database using UPOV code ZEAAA_MAY_MAY whether to allocate their existing entries to *Zea mays* ssp. *mays* Group Maize.

33.   The TC is invited to consider:

(a)   deleting the UPOV code ZEAAA_MAY_MIC, to be replaced by the UPOV code ZEAAA_MAY_EVE;

(b)   amending the UPOV codes ZEAAA_MAY_EVE, ZEAAA_MAY_MAY and ZEAAA_MAY_SAC and associated information to establish variety groups, as set out in paragraph 30 of this document; and

(c)   inviting the Office of the Union to consult contributors to the PLUTO database using UPOV code ZEAAA_MAY_MAY whether to allocate existing entries to Zea mays ssp. mays Group Maize.

<u>Presentation: "Replacing botanical nomenclature by variety groups: some practical consequences"</u>

34.   The TWV, at its fifty-seventh session, received a presentation on "Replacing botanical nomenclature by variety groups, some practical consequences" by an expert from the European Union. A copy of the presentation is provided in document TWV/57/18, Annex II. The TWV noted the report on the use of variety groups for different vegetable crops and agreed to invite the European Union to present proposals for appending information to UPOV Codes and/or creating variety groups at its fifty-eighth session (see document TWV/57/26 "Report", paragraph 47).

PROPOSED AMENDMENTS TO UPOV CODES CONSIDERED BY THE TWO IN 2023

35.   The TWO, at its fifty-fifth session, considered document TWP/7/7. The TWO agreed with the proposals to delete and/or amend UPOV Codes for ornamental species, as set out in document TWP/7/7, paragraphs 14 to 37, and reproduced in the following sections of this document.

<u>UPOV code for *Berberis* species</u>

36.   The Office of the Union was informed of the reclassification of certain *Berberis* species to *Mahonia* species.

37.   The current entries in the GENIE database for certain *Berberis* species, the taxa in GRIN and the numbers of entries in the PLUTO database, are as follows:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Number of entries in PLUTO
BERBE_AQU	*Berberis aquifolium* Pursh	*Mahonia aquifolium* (Pursh) Nutt.	blue barberry, holly barberry, holly mahonia, mountain-grape, Oregon-grape	6
BERBE_EUR	*Berberis eurybracteata* (Fedde) Laferr.	*Mahonia eurybracteata* Fedde	n.a.	3
BERBE_NIT	*Berberis nitens* (C. K. Schneid.) Laferr.	*Berberis nitens* (C. K. Schneid.) Laferr.	n.a	1
BERBE_PUM	*Berberis pumila* Greene	*Mahonia pumila* (Greene) Fedde	n.a	0
BERBE_REP	*Berberis repens* Lindl.	*Mahonia repens* (Lindl.) G. Don	creeping barberry, creeping mahonia, Oregon barberry, Oregon grape-holly, Oregon-grape	5

Proposal

38.	The TC might wish to consider replacing the UPOV codes BERBE_AQU, BERBE_EUR, BERBE_NIT, BERBE_PUM and BERBE_REP by the UPOV Codes MAHON_AQU, MAHON_EUR, MAHON_NIT, MAHON_PUM and MAHON_REP, respectively, as follows:

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
BERBE_AQU	*Berberis aquifolium* Pursh	*Berberis diversifolia* (Sweet) Steud.; *Mahonia aquifolium* (Pursh) Nutt.; *Mahonia aquifolium* subsp. *aquifolium* (Pursh) Nutt.; *Mahonia diversifolia* Sweet	MAHON_ AQU	*Mahonia aquifolium* (Pursh) Nutt.	Mahonia diversifolia Sweet; Mahonia aquifolium (Pursh) Nutt.; Mahonia aquifolium (Pursh) Nutt. subsp. aquifolium; *Mahonia aquifolium* subsp. *aquifolium* (Pursh) Nutt.
BERBE_EUR	*Berberis eurybracteata* (Fedde) Laferr.	*Mahonia eurybracteata* Fedde	MAHON_EUR	*Mahonia eurybracteata* Fedde	*Berberis eurybracteata* (Fedde) Laferr.
BERBE_NIT	*Berberis nitens* (C. K. Schneid.) Laferr.	*Mahonia nitens* C. K. Schneid.	MAHON_NIT	*Mahonia nitens* C. K. Schneid.	*Berberis nitens* (C. K. Schneid.) Laferr.
BERBE_PUM	*Berberis pumila* Greene	*Mahonia pumila* (Greene) Fedde	MAHON_PUM	*Mahonia pumila* (Greene) Fedde	*Berberis pumila* Greene
BERBE_REP	*Berberis repens* Lindl.	*Berberis sonnei* (Abrams) McMinn*; Mahonia repens* (Lindl.) G. Don*; Mahonia repens var. repens* (Lindl.) G. Don*; Mahonia repens var.* rotundifolia (May) Fedde*; Mahonia sonnei* Abrams	MAHON_REP	*Mahonia repens* (Lindl.) G. Don	*Berberis repens* Lindl.; *Berberis sonnei* (Abrams) McMinn*; Mahonia repens* (Lindl.) G. Don*; Mahonia repens var. repens* (Lindl.) G. Don*; Mahonia repens var.* rotundifolia (May) Fedde*; Mahonia sonnei* Abrams

UPOV code for Calathea species

39.	The Office of the Union was informed of the reclassification of certain *Calathea* species to *Goeppertia* species.

40.	The current entries in the GENIE database for certain *Calathea* species, the taxa in GRIN and the numbers of entries in the PLUTO database, are as follows:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Number of entries in PLUTO
CALAT_CRO	*Calathea crocata* E. Morren & Joriss.	*Goeppertia crocata* (É. Morren & Joriss.) Borchs. & S. Suárez	n.a.	8
CALAT_LOE	*Calathea loeseneri* J. F. Macbr.	*Goeppertia loeseneri* (J. F. Macbr.) Borchs. & S. Suárez	n.a.	0
CALAT_ROS	*Calathea roseopicta* (Linden) Regel	*Goeppertia roseopicta* (Linden) Borchs. & S. Suárez	n.a.	25
CALAT_WAR	*Calathea warscewiczii* (Klotzsch) Körn.	*Goeppertia warscewiczii* (L. Mathieu ex Planch.) Borchs. & S. Suárez	n.a.	3
CALAT_LRO	*Calathea loeseneri* J. F. Macbr. × *Calathea roseopicta* (Linden) Regel	n.a.	n.a.	5

Proposal

41.	The TC might wish to consider replacing the UPOV Codes CALAT_CRO, CALAT_LOE, CALAT_ROS, CALAT_WAR and CALAT_LRO by the UPOV Codes GOEPP_CRO GOEPP_LOE, GOEPP_ROS, GOEPP_WAR and GOEPP_LRO, as follows:

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
CALAT_CRO	*Calathea crocata* E. Morren & Joriss.	*Goeppertia crocata* (É. Morren & Joriss.) Borchs. & S. Suárez	GOEPP_CRO	*Goeppertia crocata* (É. Morren & Joriss.) Borchs. & S. Suárez	*Calathea crocata* É. Morren & Joriss.
CALAT_LOE	*Calathea loeseneri* J. F. Macbr.	n.a.	GOEPP_LOE	*Goeppertia loeseneri* (J. F. Macbr.) Borchs. & S. Suárez	*Calathea loeseneri* J. F. Macbr.
CALAT_ROS	*Calathea roseopicta* (Linden) Regel	*Goeppertia roseopicta* (Linden) Borchs. & S. Su rez	GOEPP_ROS	*Goeppertia roseopicta* (Linden) Borchs. & S. Suárez	*Calathea roseopicta* (Linden) Regel
CALAT_WAR	*Calathea warscewiczii* (Klotzsch) Körn.	*Calathea warscewiczii* (Mathieu ex Planch.) Körn.	GOEPP_WAR	*Goeppertia warscewiczii* (L. Mathieu ex Planch.) Borchs. & S. Suárez	*Calathea warscewiczii* (L. Mathieu ex Planch.) Planch. & Linden
CALAT_LRO	*Calathea loeseneri* J. F. Macbr. × *Calathea roseopicta* (Linden) Regel	n.a.	GOEPP_LRO	*Goeppertia loeseneri* (J. F. Macbr.) Borchs. & S. Suárez × *G. roseopicta* (Linden) Borchs. & S. Suárez	*Calathea loeseneri* J. F. Macbr. × *C. roseopicta* (Linden) Regel

UPOV code for Castalis species

42.   The Office of the Union was informed of the reclassification of certain *Castalis* species to *Dimorphotheca* species.

43.   The current entries in the GENIE database for certain *Castalis* species, the taxa in GRIN and the numbers of entries in the PLUTO database, are as follows:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Number of entries in PLUTO
CASTL_TRA	*Castalis tragus* (Aiton) Norl.	*Dimorphotheca tragus* (Aiton) DC..	n.a.	3

Proposal

44.   The TC might wish to consider replacing the UPOV code CASTL_TRA by the UPOV Code DIMOR_TRA, as follows:

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
CASTL_TRA	*Castalis tragus* (Aiton) Norl.	*Dimorphoteca aurantiaca; Dimorphoteca aurantiaca* DC.; *Dimorphotheca aurantiaca* DC.; *Dimorphotheca tragus* (Aiton) B. Nord.	DIMOR_TRA	*Dimorphotheca tragus* (Aiton) DC.	Castalis tragus (Aiton) Norl.; *aurantiaca; Dimorphoteca aurantiaca* DC.*; Dimorphotheca aurantiaca* DC.

UPOV code for Cleome species

45.   The Office of the Union was informed of the reclassification of certain *Cleome* species to *Tarenaya* species.

46.   The current entries in the GENIE database for certain *Tarenaya* species, the taxa in GRIN and the numbers of entries in the PLUTO database, are as follows:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Number of entries in PLUTO
CLEOM_HAS	*Cleome hassleriana* Chodat	*Tarenaya hassleriana* (Chodat) H. H. Iltis (synonym: *Cleome hassleriana* Chodat, *Cleome pungens* auct., *Cleome spinosa* auct.*)*	pink-queen; spider-flower; spiderplant	8
CLEOM_SPI	*Cleome spinosa* Jacq.	*Tarenaya spinosa* (Jacq.) Raf. (synonym: *Cleome spinosa* Jacq.*)*	spiny spider-flower	12

Proposal

47.   The TC might wish to consider replacing the UPOV Codes CLEOM_HAS and CLEOM_SPI by the UPOV Codes TARNY_SPI and TARNY_HAS, respectively, as follows:

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
CLEOM_HAS	*Cleome hassleriana* Chodat	*Cleome pungens* auct.; *Cleome spinosa* auct.; *Tarenaya hassleriana* (Chodat) H. H. Iltis	TARNY_SPI	*Tarenaya hassleriana* (Chodat) H. H. Iltis	*Cleome hassleriana* Chodat, *Cleome pungens* auct., *Cleome spinosa* auct.
CLEOM_SPI	*Cleome spinosa* Jacq.	*Tarenaya spinosa* (Jacq.) Raf.	TARNY_HAS	*Tarenaya spinosa* (Jacq.) Raf.	*Cleome spinosa* Jacq.

UPOV code for Deschampsia species

48.   The Office of the Union was informed of the reclassification of certain *Deschampsia* species to *Avenella* species.

49.   The current entries in the GENIE database for certain *Deschampsia* species, the taxa in GRIN and the numbers of entries in the PLUTO database, are as follows:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Number of entries in PLUTO
DESCH_FLE	*Deschampsia flexuosa* (L.) Trin.	*Avenella flexuosa* (L.) Parl.	n.a	2

Proposal

50.   The TC might wish to consider replacing the UPOV code DESCH_FLE by the UPOV Code AVENE_FLE, as follows:

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
DESCH_FLE	*Deschampsia flexuosa* (L.) Trin.	*Avenella flexuosa* (L.) Parl.	AVENE_FLE	*Avenella flexuosa* (L.) Parl.	*Deschampsia flexuosa* (L.) Trin.

UPOV code for Epiphyllum species

51.   The Office of the Union was informed of the reclassification of certain *Epiphyllum* species to *Tarenaya* species.

52.   The current entries in the GENIE database for certain *Tarenaya* species, the taxa in GRIN and the numbers of entries in the PLUTO database, are as follows:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Number of entries in PLUTO
EPIPH_ANG	*Epiphyllum anguligerum* (Lem.) G.Don	*Disocactus anguliger* (Lem.) M. Á. Cruz & S. Arias	n.a.	2

Proposal

53.   The TC might wish to consider replacing the UPOV Code EPIPH_ANG by the UPOV Codes DISOC_NGL, as follows:

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
EPIPH_ANG	*Epiphyllum anguligerum* (Lem.) G.Don	*Disocactus anguliger* (Lem.) M. Á. Cruz & S. Arias	DISOC_NGL	*Disocactus anguliger* (Lem.) M. Á. Cruz & S. Arias	*Epiphyllum anguligerum* (Lem.) G.Don

UPOV code for Osteospermum species

54.   The Office of the Union was informed of the reclassification of certain *Osteospermum* species to *Dimorphotheca* species.

55.   The current entries in the GENIE database for certain *Osteospermum* species, the taxa in GRIN and the numbers of entries in the PLUTO database, are as follows:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Number of entries in PLUTO
OSTEO_ECK	*Osteospermum ecklonis* (DC.) Norl.	*Dimorphotheca ecklonis* DC.	n.a.	1,159
OSTEO_FRU	*Osteospermum fruticosum* (L.) Norl.	*Dimorphotheca fruticosa* (L.) DC.	n.a.	34

Proposal

56.   The TC might wish to consider replacing the UPOV Codes OSTEO_ECK, OSTEO_FRU and OSTEO_ECC by the UPOV Codes DIMOR_ECK, DIMOR _FRU and DIMOR_ECC, respectively, as follows:

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
OSTEO_ECK	*Osteospermum ecklonis* (DC.) Norl.	*Dimorphotheca ecklonis* DC.	DIMOR_ECK	*Dimorphotheca ecklonis* DC.	*Osteospermum ecklonis* (DC.) Norl.
OSTEO_FRU	*Osteospermum fruticosum* (L.) Norl.	n.a.	DIMOR _FRU	*Dimorphotheca fruticosa* (L.) DC.	*Osteospermum fruticosum* (L.) Norl.

UPOV code for Uncinia species

57.   The Office of the Union was informed of the reclassification of *Uncinia* to *Carex* species.

58.   The current entries in the GENIE database for certain *Uncinia* species, the taxa in GRIN and the numbers of entries in the PLUTO database, are as follows:

UPOV code	Principal botanical name in GENIE	Botanical name(s) in GRIN	Common name(s) in GENIE	Number of entries in PLUTO
UNCIN	*Uncinia* Pers.	*Carex* L.	n.a	0
UNCIN_DIV	*Uncinia divaricata* Boott	*Carex edura* K. A. Ford	n.a.	0
UNCIN_EGM	*Uncinia egmontiana* Hamlin	*Carex egmontiana* (Hamlin) K. A. Ford	*Egmont hook sedge; Mount Egmont tussock*	0
UNCIN_RUB	*Uncinia rubra* Colenso ex Boott	*Carex punicea* K. A. Ford	n.a	4
UNCIN_UNC	*Uncinia uncinata* (L. f.) Kük.	*Carex uncinata* L. f.	n.a	2

Proposal

59.   The TC might wish to consider the deletion of the UPOV codes UNCIN, UNCIN_DIV, UNCIN_EGM, UNCIN_RUB and UNCIN_UNC. *Uncinia* species would be covered as a synonym of *Carex* species under UPOV codes CAREX, CAREX _DIV, CAREX _EGM, CAREX _RUB and CAREX _UNC, as follows:

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
UNCIN	*Uncinia* Pers.	n.a	CAREX	*Carex* L.	*Uncinia* Pers.
UNCIN_DIV	*Uncinia divaricata* Boott	n.a	CAREX _DIV	*Carex edura* K. A. Ford	*Uncinia divaricata* Boott
UNCIN_EGM	*Uncinia egmontiana* Hamlin	n.a	CAREX _EGM	*Carex egmontiana* (Hamlin) K. A. Ford	*Uncinia egmontiana* Hamlin
UNCIN_RUB	*Uncinia rubra* Colenso ex Boott	n.a	CAREX _RUB	*Carex punicea* K. A. Ford	*Uncinia rubra* Colenso ex Boott
UNCIN_UNC	*Uncinia uncinata* (L. f.) Kük.	n.a	CAREX _UNC	*Carex uncinata* L. f.	*Uncinia uncinata* (L. f.) Kük.

60. The TC is invited to consider the proposal to delete and amend the UPOV Codes CLEOM_HAS, CLEOM_SPI, EPIPH_ANG, CALAT_CRO, CALAT_LOE, CALAT_ROS, CALAT_WAR, CALAT_LRO, OSTEO_ECK, OSTEO_FRU, OSTEO_ECC, CASTL_TRA BERBE_AQU, BERBE_EUR, BERBE_NIT, BERBE_PUM, BERBE_REP, DESCH_FLE, UNCIN, UNCIN_DIV, UNCIN_EGM, UNCIN_RUB and UNCIN_UNC, as set out in paragraphs 34 to 57 of this document.

MATTERS FOR INFORMATION

GENIE database

Background

61.   The GENIE database (http://www.upov.int/genie/en/) has been developed to provide online information on the status of protection, cooperation in examination, experience in DUS testing and existence of UPOV Test Guidelines for different GENera and specIEs (hence GENIE). The GENIE database is used to generate the relevant Council and TC documents concerning that information[4].

62.   The GENIE database is the repository of the UPOV codes and provides information concerning the principal and alternative botanical names and common names of plant taxa.

UPOV code developments

63.   In 2022, 183 new UPOV codes were created. The total number of UPOV codes in the GENIE database as of December 31, 2022 was 9,525.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New UPOV codes	212	209	577	188	173	440	242	243	177	131	183
Amendments	5	47*	37	11	16	1	5	3	44	35	35
Total UPOV Codes	7,061	7,251	7,808	7,992	8,149	8,589	8,844	9,077	9,213	9,342	9,525

*   including changes to UPOV codes resulting from the amendment of the "Guide to the UPOV Code System" concerning hybrids (see document TC/49/6).

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[4] See documents C/[session]/INF/6 "List of the taxa protected by the members of the Union; C/[session]/INF/5 "Cooperation in Examination"; TC/[session]/INF/4 "List of genera and species for which authorities have practical experience in the examination of distinctness, uniformity and stability"; and TC/[session]/2 "Test Guidelines".

TWP checking

64.   Section 3.3 of the "Guide to the UPOV Code System" provides the following:

"Amendments to UPOV codes will be handled by the same procedure as the introduction of new UPOV codes […]. However, in addition, all members of the Union and contributors of data to the Plant Variety Database will be informed of any amendments".

65.   In accordance with the procedure set out in Section 3.3 of the Guide to the UPOV Code System, the Office of the Union prepared tables of UPOV code additions and amendments, for checking by the relevant authorities, for each of the Technical Working Party (TWP) sessions in 2023.

66.   Experts of the Technical Working Party for Vegetables (TWV), Technical Working Party for Ornamental Plants and Forest Trees (TWO), Technical Working Party for Agricultural Crops (TWA) and Technical Working Party for Fruit Crops (TWF) are invited to check the amendments, new UPOV codes or information, and UPOV codes used in the PLUTO database for the first time, as reproduced in the Annexes to document TWP/7/7 "UPOV information and databases" and submit comments to the Office of the Union by December 31, 2023.

Previously agreed amendments to UPOV codes

67.   Section 4.3 (d) of the "Guide to the UPOV Code System" provides the following:

"Amendments to UPOV codes will be handled by the same procedure as the introduction of new UPOV codes […]. However, in addition, all members of the Union and contributors of data to the Plant Variety Database will be informed of any amendments".

68.   On the basis of the conclusions at the TC, at its fifty-seventh session, on the matters presented in the following sections, members of the Union and contributors of data to the PLUTO database will be informed of the changes and the date of the changes by means of a Circular in advance. Contributors of data to the PLUTO database will be requested to use the amended UPOV codes when submitting their plant variety data to the Office of the Union.

UPOV codes for Citrus

69.   On the basis of the conclusions at the TC, the UPOV code CITRU_AUM will be amended to append information to create groups "1MA" for mandarins and "2OR" for oranges, as following.

Old					New		
Entries in PLUTO	TG	UPOV Code	Principal botanical name	Other botanical name(s)	UPOV Code	Principal botanical name	Other botanical name(s)
10	TG/202	CITRU_AUM	*Citrus aurantium* L.	n.a.	CITRU_AUM_**1MA** CITRU_AUM_**2OR**	Citrus ×*aurantium* L.	*Citrus amara* Link; *Citrus bigarradia* Loisel.; *Citrus intermedia* hort. ex Tanaka; *Citrus taitensis* Risso; *Citrus vulgaris* Risso; *Citrus* ×*aurantium* subsp. *aurantium* L.; *Citrus* ×*aurantium* subsp. *jambiri* Engl.; *Citrus* ×*aurantium* subsp. *keonla* Engl.; *Citrus* ×*aurantium* subsp. *suntara* Engl.; *Citrus* ×*aurantium* var. *aurantium* L.; *Citrus* ×*aurantium* var. *citrina* Lush.; *Citrus* ×*bigarradia* var. *volkameriana* Risso; *Citrus* ×*clementina* hort. ex Tanaka; *Citrus* ×*crenatifolia* Lush.; *Citrus reticulata* × *C. maxima*
115	TG/201	CITRU_CLE	*Citrus clementina* hort. ex Tanaka	n.a.			
1	/	CITRU_MRE	*Citrus maxima* X *Citrus reticulata*	n.a.			
0	TG/201	CITRU_CRE	*Citrus crenatifolia* Lush.	n.a.			
0	TG/204	CITRU_INT	*Citrus intermedia* hort. ex Tanaka	n.a.			

70.   The UPOV codes CITRU_CLE, CITRU_MRE, CITRU_CRE, CITRU_INT, CITRU_AUR, CITRU_DAV, CITRU_EXC, CITRU_KER, CITRU_BAL and CITRU_KAR and CITRU_BEN will be deleted.

[End of document]