

Technical Committee**TC/58/10.****Fifty-Eighth Session
Geneva, October 24 and 25, 2022****Original:** English
Date: October 12, 2022**UPOV INFORMATION DATABASES***Document prepared by the Office of the Union**Disclaimer: this document does not represent UPOV policies or guidance***EXECUTIVE SUMMARY**

1. The purpose of this document is to report on developments concerning the GENIE database and to present proposals to amend UPOV codes.
2. This document is presented in two sections. The first section, "Proposals for amending the UPOV code system and UPOV codes", presents matters which may require a decision to be taken by the TC. The second section, "Matters for information", is provided for the information of the TC but does not require decisions at this stage.
3. The TC is invited to consider:
 - (a) a proposal to revise document UPOV/INF/23 "UPOV Code System" to clarify the maximum number of characters to be used in the appended element to UPOV codes, as set out in paragraphs 10 and 11 of this document;
 - (b) inviting the TWA and TWV, at their sessions in 2023, to consider the proposal to create variety groups for UPOV codes for *Beta vulgaris* L. ssp. *vulgaris*, as set out in paragraph 18 of this document, respectively;
 - (c) inviting the TWV, at its session in 2023, to consider the proposal to create variety groups for UPOV codes for *Brassica oleracea*, as set out in paragraph 19 of this document;
 - (d) inviting the TWA and TWV, at their sessions in 2023, to consider whether to create variety groups for the UPOV code ZEAAA_MAY_MAY, as set out in paragraph 21;
 - (e) the proposal to delete the UPOV codes HYLOC, HYLOC_COS, HYLOC_GUA, HYLOC_GUN, HYLOC_POL and HYLOC_UND, as set out in paragraph 27 of this document; and
 - (f) the proposal to delete the UPOV codes CALAT_CRO, CALAT_LOE, CALAT_LRO, CALAT_ROS and CALAT_WAR, as set out in paragraph 30 of this document.
4. The TC is invited to note:
 - (a) that 131 new UPOV codes were created in 2021 and a total of 9,342 UPOV codes are included in the GENIE database;
 - (b) that the TWV, at its fifty-sixth session, agreed that variety groups should be used to replace complex infra-specific botanical names, such as for *Beta vulgaris*, *Brassica oleracea* and *Cichorium intybus*;
 - (c) the invitation for the Netherlands to further develop the proposal to create variety groups for *Beta vulgaris*, *Brassica oleracea* and *Cichorium intybus* to be presented at the fifty-seventh session of the TWV;

(d) the invitation by the TWV for the Office of the Union to develop proposals for revising the UPOV codes with appended information according to the approach to use variety groups for complex botanical names;

(e) that the UPOV code CITRU_AUM will be amended to append information to create groups “1MA” for mandarins and “2OR” for oranges, as set out in paragraph 41; and

(f) that, on the basis of the conclusions at the TC, at its fifty-seventh session, the UPOV codes BRASS_OLE_GA, BRASS_OLE_GB, CITRU_AUR, CITRU_CLE, CITRU_MRE, CITRU_CRE, CITRU_INT, CITRU_AUR, CITRU_DAV, CITRU_EXC, CITRU_KER, CITRU_BAL, CITRU_KAR, CITRU_BEN, ZEAAA_MAY_SAC, ZEAAA_MAY_EVE and ZEAAA_MAY_MIC will be deleted, as set out in paragraphs 40, 42 and 43, on January 1, 2023, and the members of the Union and contributors of data to the PLUTO database will be informed of the changes by means of a Circular in advance.

5. Matters concerning developments on the PLUTO plant variety database (PLUTO database) are presented in document TC/57/INF/3 “PLUTO Plant Variety Database”.

6. The structure of this document is as follows:

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7. 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
TWC:	Technical Working Party on Automation and Computer Programs
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

PROPOSALS FOR AMENDING THE UPOV CODE SYSTEM AND UPOV CODES UPOV Code System

8. The guide to the UPOV code system (document UPOV/INF/23 “UPOV Code System”) was adopted by the Council on September 21, 2021, and is available on the UPOV website at https://www.upov.int/genie/resources/pdfs/upov_code_system_en.pdf (see document C/55/12 “Outcome of consideration of documents by correspondence”, paragraph 32).

Proposals for the revision of document UPOV/INF/23 "Guide to the UPOV code system"

Maximum number of characters in the appended element to UPOV codes

9. The TC, at its fifty-seventh session¹, considered a proposal to clarify the maximum number of characters to be used in the appended element to UPOV codes, as set out in document UPOV/INF/23 "UPOV Code System", and agreed to request the Office of the Union to develop a proposal for consideration by the TWPs and the TC, at their sessions in 2022 (see document TC/57/25 "Report", paragraph 35).

10. At their sessions in 2022, the TWV², TWA³, TWO⁴, TWF⁵ and TWM⁶ considered a proposal developed by the Office of the Union and agreed to revise document UPOV/INF/23 "Guide to the UPOV Code System" as follows (see documents TWV/56/22 "Report", paragraph 7; TWA/51/11 "Report", paragraph 23; TWO/54/6 "Report", paragraph 22; TWF/53/14 "Report", paragraph 7; and TWM/1/26 "Report", paragraph 7) (deletions indicated with highlighting and ~~strike through~~; additions indicated with highlighting and underline):

"5 UPOV CODE: APPENDED INFORMATION

"5.1 Appended element construction

"5.1.1. Where required, an element may be appended to a UPOV code to provide information on the variety group, variety type and/or denomination class.

"The appended element to UPOV codes is identifiable through the following naming convention:

- "A digit (number from 1 to 9) prefix identifies the new appended element.
- "Different digits or letters could, if appropriate, indicate different categories of information.
- "The appended element should contain a maximum of six digits or letters in total (e.g. '1AC2TG')"

"This element may be appended to any UPOV code, regardless of plant taxa (genera, species or subspecies levels). Examples:

"UPOV code for genus *Abies*: ABIES

"UPOV code with appended element: ABIES 1234 1AC2TG

"UPOV code for species *Abies sibirica*: ABIES_SIB

"UPOV code with appended element: ABIES_SIB 1234 1AC2TG

"UPOV code for sub-species *Abies sibirica* subsp. *semenovii*: ABIES_SIB_SEM

"UPOV code with appended element: ABIES_SIB_SEM 1234 1AC2TG"

Correction of cross-references to document UPOV/EXN/DEN

11. Cross-references to document UPOV/INF/12 "Explanatory Notes to Variety Denominations under the UPOV Convention" should be corrected and replaced by UPOV/EXN/DEN in paragraphs 4.2 and 4.3 of document UPOV/INF/23, as follows:

"4.2 Inter-generic and inter-specific hybrids

4.2.6 In the case of UPOV codes for hybrid genera and species, the UPOV code will not distinguish between two hybrids produced using the same parents. A UPOV code is created for the first hybrid notified to UPOV in accordance with the procedure set out in paragraphs ~~2.2.3 to 2.2.5~~ 4.2.3 to 4.2.5. However, if a subsequent request is received for a hybrid involving the same genera/species in a different combination, the Principal Botanical Name will be amended to indicate that the UPOV code covers all combinations involving the same genera/species."

¹ Held via electronic means on October 25 and 26, 2021

² at its fifty-sixth session, held via electronic means, from April 18 to 22, 2022

³ at its fifty-first session, hosted by the United Kingdom and held via electronic means, from May 23 to 27, 2022

⁴ at its fifty-fourth session, , hosted by Germany held via electronic means, from June 13 to 17, 2022

⁵ at its fifty-third session, held via electronic means, from July 11 to 15, 2022

⁶ at its first session, held via electronic means, from September 19 to 23, 2022

“4.3 Introduction of New UPOV Codes / Amendments to UPOV Codes

“(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. The “Explanatory notes on variety denominations under the UPOV Convention” (document [UPOV/INF/12](#) [UPOV/EXN/DEN](#)) contain UPOV variety denomination classes; for genera and species not covered by the List of Classes in Annex I to document [UPOV/INF/12](#) [UPOV/EXN/DEN](#), the general rule (“one genus / one class”) is that a genus is considered to be a class (see document [UPOV/INF/12](#) [UPOV/EXN/DEN](#), Section [2.5.2](#) [4.5.2](#) and its Annex I). [...]”

Proposals for amending UPOV codes

Replacing complex botanical nomenclature by variety groups

Background

12. The TC, at its fifty-seventh session⁷, agreed to amend the UPOV codes for *Beta vulgaris*, *Brassica oleracea*, *Citrus* and *Zea mays*, as reproduced in the Annex to this document (see document TC/57/25 “Report”, paragraphs 69 to 80).

13. The TWV, at its fifty-sixth session⁸, received presentations on “Use of Variety Groups in the UPOV system for *Brassica oleracea* and other vegetable crops” and “UPOV codes for *Cichorium intybus*” from an expert from the Netherlands. A copy of the presentations is provided in documents TWV/56/13 and TWV/56/15, respectively (see document TWV/56/22 “Report”, paragraphs 26 to 30).

14. The TWV, at its fifty-sixth session, agreed that variety groups should be used to replace complex infra-specific botanical names, such as for *B. vulgaris*, *B. oleracea* and *C. intybus*. The TWV agreed to invite the Netherlands to further develop the proposal to create variety groups for *B. vulgaris*, *B. oleracea* and *C. intybus*, to be presented at the fifty-seventh session of the TWV.

15. The TWV, at its fifty-sixth session, agreed to invite the Office of the Union to develop proposals for revising the UPOV codes with appended information according to the approach to use variety groups for complex botanical names, to be presented at the fifty-seventh session of the TWV.

16. The TWV, at its fifty-sixth session, recalled that, at its fifty-fourth session, it had noted that approximately 1,200 varieties with UPOV code CICHO_INT in the PLUTO database could not be allocated with certainty to any variety group. The TWV agreed to invite contributors to the PLUTO database to further precise whether the varieties belonged to the groups “forage-”, “industrial-”, “leaf-” or “witloof-chicory”.

Proposal

17. Following the proposal by the TWV to replace complex infra-specific botanical names by variety groups, the TC may wish to consider revising its decision, at the fifty-seventh session, to append information to the UPOV codes for *Beta vulgaris*, *Brassica oleracea* and *Citrus* and *Zea mays*.

UPOV codes for Beta vulgaris

18. It is proposed that the TC consider inviting the TWA and TWV, at their sessions in 2023, to consider the following proposal to create variety groups to the UPOV codes for *Beta vulgaris* L. ssp. *vulgaris*, and consider whether to delete the UPOV code BETAA_VUL_GV to avoid the situation where a variety cannot be allocated with certainty to any variety group.

Denomination class	Botanical names	Current UPOV code	UPOV Codes with appended information	Proposed UPOV code with group information
Class 2.1	<i>Beta vulgaris</i> L. subsp. <i>vulgaris</i> (Fodder beet Group)	BETAA_VUL_GVA	BETAA_VUL_VUL_21 FB	BETAA_VUL_GVA

⁷ Held via electronic means on October 25 and 26, 2021

⁸ Held via electronic means on April 18 to 22, 2022 Please add when and where

	(synonym to <i>Beta vulgaris</i> L. subsp. <i>vulgaris</i> var. <i>alba</i> DC.)			
	<i>Beta vulgaris</i> L. subsp. <i>vulgaris</i> (Sugar beet Group) (synonym to <i>Beta vulgaris</i> L. subsp. <i>vulgaris</i> var. <i>saccharifera</i> Alef.)	BETAA_VUL_GVS	BETAA_VUL_VUL_21 SB	BETAA_VUL_GVS
Class 2.2	<i>Beta vulgaris</i> L. subsp. <i>vulgaris</i> (Beetroot Group) (synonym to <i>Beta vulgaris</i> L. subsp. <i>vulgaris</i> var. <i>conditiva</i> Alef.)	BETAA_VUL_GVC	BETAA_VUL_VUL_22 BR	BETAA_VUL_GVC
	<i>Beta vulgaris</i> L. subsp. <i>vulgaris</i> (Leaf beet Group) (synonym to <i>Beta vulgaris</i> L. subsp. <i>vulgaris</i> var. <i>flavescens</i> DC. f. <i>crispa</i>)	BETAA_VUL_GVF	BETAA_VUL_VUL_22 LB	BETAA_VUL_GVF
Class 2.3	Beta other than classes 2.1 and 2.2.	BETAA; BETAA_VUL; BETAA_VUL_GV		BETAA; BETAA_VUL;

UPOV codes for Brassica oleracea

19. It is proposed that the TC consider inviting the TWV, at its session in 2023, to consider the following proposal to create variety groups for the UPOV code *Brassica oleracea* var. *capitata* L..

Botanical names	Current UPOV code	UPOV Codes with appended information	Proposed UPOV code with group information
<i>Brassica oleracea</i> L. var. <i>capitata</i> L. (White Cabbage Groups) (synonym to <i>Brassica oleracea</i> L. f. <i>alba</i> DC.)	BRASS_OLE_GCA	BRASS_OLE_GC_1W	BRASS_OLE_GCA
<i>Brassica oleracea</i> L. var. <i>capitata</i> L. (Red Cabbage Group) (synonym to <i>Brassica oleracea</i> L. var. <i>rubra</i> L.)	BRASS_OLE_GCR	BRASS_OLE_GC_2R	BRASS_OLE_GCR

UPOV codes for Zea mays

20. The TC, at its fifty-seventh session, agreed to append information to the UPOV code ZEAAA_MAY_MAY to establish variety groups as follows:

Principal botanical name	Other botanical name(s)	Variety groups	UPOV code with appended information
<i>Zea mays</i> L. subsp. <i>mays</i>	Zea mays var. <i>ceratina</i> L.; Zea mays var. <i>indentata</i> (Sturtev.) L. H. Bailey; Zea mays var. <i>indurata</i> (Sturtev.) L. H. Bailey; Zea mays var. <i>saccharata</i> (Sturtev.) L. H. Bailey; Zea mays L. <i>saccharata</i> Koern.; Zea mays L. var. <i>everta</i> (Praecox) Sturt.; Zea mays L. convar. <i>microsperma</i> Koern.	Corn; Maize: "1MA"	ZEAAA_MAY_MAY_1 MA
		Sweet Corn: "2SW"	ZEAAA_MAY_MAY_1 SW
		Popcorn: "3PO"	ZEAAA_MAY_MAY_3 PO

21. The TC may wish to consider whether to invite the TWA and TWV, at their sessions in 2023, to consider whether to create variety groups for the UPOV code ZEAAA_MAY_MAY replacing infra-specific botanical names, as follows:

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

Proposed amendments considered by the TWF and TWO in 2022

22. The following section present proposals for amendments to UPOV codes considered by the TWF and TWO at their session in 2022.

23. 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”.

24. On the basis of the conclusions at the TC 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 code for Hylocereus species

25. The Office of the Union was informed of the reclassification of certain *Hylocereus* species to *Selenicereus* species.

26. The current entries in the GENIE database for certain *Hylocereus* 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
HYLOC	<i>Hylocereus</i> (A. Berger) Britton & Rose	n.a.	Asian bleeding-heart; Bleeding-heart	0
HYLOC_COS	<i>Hylocereus costaricensis</i> (F. A. C. Weber) Britton & Rose	n.a.		0
HYLOC_GUA	<i>Hylocereus guatemalensis</i> (Eichlam) Britton & Rose	n.a.		0
HYLOC_GUN	hybrids between <i>Hylocereus guatemalensis</i> (Eichlam) Britton & Rose and <i>Hylocereus undatus</i> (Haw.) Britton et Rose	n.a.		1
HYLOC_POL	<i>Hylocereus polyrhizus</i> (F. A. C. Weber) Britton & Rose	n.a.	pitahaya	0
HYLOC_UND	<i>Hylocereus undatus</i> (Haw.) Britton & Rose	<i>Cereus undatus</i> Haw.	belle-of-the-night; dragon-fruit; moonlight cactus; night-blooming cereus; queen-of-the-night; red pitaya; strawberry-pear	23

27. At their sessions in 2022, the TWO⁹ and TWF¹⁰ agreed to delete the UPOV Codes HYLOC, HYLOC_COS, HYLOC_GUA, HYLOC_GUN, HYLOC_POL and HYLOC_UND, as indicated below. The genus and species *Hylocereus*, *H. costaricensis*, *H. guatemalensis*, hybrids between *H. guatemalensis* and *H. undatus*, *H. polyrhizus*, and *H. undatus* would be covered as synonym of *Selenicereus*, *S. guatemalensis*, Hybrids between *S. guatemalensis* and *S. undatus*, *S. monacanthus*, and *S. undatus* under new UPOV codes SELEN, SELEN_COS, SELEN_GUA, SELEN_GUN, SELEN_POL and SELEN_UND, respectively, which the Office of the Union would create (see document TWO/54/6 “Report”, paragraph 45).

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)

⁹ at its fifty-fourth session, , hosted by Germany held via electronic means, from June 13 to 17, 2022

¹⁰ at its fifty-third session, held via electronic means, from July 11 to 15, 2022

Current			Proposal		
HYLOC	<i>Hylocereus</i> (A. Berger) Britton & Rose	n.a.	SELEN	<i>Selenicereus</i> (A. Berger) Britton & Rose	<i>Hylocereus</i> (A. Berger) Britton & Rose
HYLOC_COS	<i>Hylocereus costaricensis</i> (F. A. C. Weber) Britton & Rose	n.a.	SELEN_COS	<i>Selenicereus costaricensis</i> (F. A. C. Weber) S. Arias & N. Korotkova	<i>Hylocereus costaricensis</i> (F. A. C. Weber) Britton & Rose
HYLOC_GUA	<i>Hylocereus guatemalensis</i> (Eichlam) Britton & Rose	n.a.	SELEN_GUA	<i>Selenicereus guatemalensis</i> (Eichlam ex Weing.) D. R. Hunt	<i>Hylocereus guatemalensis</i> (Eichlam) Britton & Rose
HYLOC_GUN	hybrids between <i>Hylocereus guatemalensis</i> (Eichlam) Britton & Rose and <i>Hylocereus undatus</i> (Haw.) Britton et Rose	n.a.	SELEN_GUN	Hybrids between <i>Selenicereus guatemalensis</i> (Eichlam) Britton & Rose and <i>Selenicereus undatus</i> (Haw.) Britton et Rose	hybrids between <i>Hylocereus guatemalensis</i> (Eichlam) Britton & Rose and <i>Hylocereus undatus</i> (Haw.) Britton et Rose
HYLOC_POL	<i>Hylocereus polyrhizus</i> (F. A. C. Weber) Britton & Rose	n.a.	SELEN_POL	<i>Selenicereus monacanthus</i> (Lem.) D. R. Hunt	<i>Hylocereus polyrhizus</i> (F. A. C. Weber) Britton & Rose
HYLOC_UND	<i>Hylocereus undatus</i> (Haw.) Britton & Rose	<i>Cereus undatus</i> Haw.	SELEN_UND	<i>Selenicereus undatus</i> (Haw.) D. R. Hunt	<i>Cereus undatus</i> Haw.

UPOV code for *Calathea* species

28. The Office of the Union was informed of the reclassification of certain *Calathea* species to *Goepertia* species.

29. 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	<i>Calathea</i> G.F.W. Mey.	n.a.	n.a.	65
CALAT_CRO	<i>Calathea crocata</i> E. Morren & Joriss.	<i>Goepertia crocata</i> (É. Morren & Joriss.) Borchs. & S. Suárez	n.a.	8
CALAT_ECU	<i>Calathea ecuadoriana</i> H. A. Kenn.	n.a.	n.a.	1
CALAT_LIE	<i>Calathea lietzei</i> E. Morren	n.a.	n.a.	7
CALAT_LOE	<i>Calathea loeseneri</i> J. F. Macbr.	n.a.	n.a.	0
CALAT_LRO	<i>Calathea loeseneri</i> J. F. Macbr. X <i>Calathea roseopicta</i> (Linden) Regel	n.a.	n.a.	5
CALAT_ROS	<i>Calathea roseopicta</i> (Linden) Regel	<i>Goepertia roseopicta</i> (Linden) Borchs. & S. Su rez	n.a.	22
CALAT_WAR	<i>Calathea warscewiczii</i> (Klotzsch) Körn.	<i>Calathea warscewiczii</i> (Mathieu ex Planch.) Körn.	n.a.	3

30. At its session in 2022, the TWO agreed to delete the UPOV Codes CALAT_CRO, CALAT_LOE, CALAT_LRO, CALAT_ROS and CALAT_WAR, as indicated below. The species *Calathea crocata*, *Calathea loeseneri*, *Calathea loeseneri*, x *Calathea roseopicta*, *Calathea roseopicta*, and *Calathea warscewiczii* would be covered as synonym of *Goepertia*, *Goepertia*, *Goepertia loeseneri* x *Goepertia roseopicta*, *Goepertia roseopicta*, and *Goepertia warscewiczii* under new UPOV codes GOEPP_CRO, GOEPP_LOE, GOEPP_LRO, GOEPP_ROS and GOEPP_WAR, respectively, which the office of the union would create (see documents TWO/54/6 "Report", paragraph 46 and TWF/53/14 "Report", paragraph 35).

Current			Proposal		
UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
CALAT_CRO	<i>Calathea crocata</i> E. Morren & Joriss.	<i>Goepertia crocata</i> (É. Morren &	GOEPP_CRO	<i>Goepertia crocata</i> (É. Morren & Joriss.) Borchs. & S. Suárez	<i>Calathea crocata</i> É. Morren & Joriss.

Current			Proposal		
		Joriss.) Borchs. & S. Suárez			
CALAT_LOE	<i>Calathea loeseneri</i> J. F. Macbr.	n.a.	GOEPP_LOE	<i>Goeppertia loeseneri</i> (J. F. Macbr.) Borchs. & S. Suárez	<i>Calathea loeseneri</i> J. F. Macbr.
CALAT_LRO	<i>Calathea loeseneri</i> J. F. Macbr. X <i>Calathea roseopicta</i> (Linden) Regel	n.a.	GOEPP_LRO	<i>Goeppertia loeseneri</i> (J. F. Macbr.) Borchs. & S. Suárez x <i>Goeppertia roseopicta</i> (Linden) Borchs. & S. Suárez	n.a.
CALAT_ROS	<i>Calathea roseopicta</i> (Linden) Regel	<i>Goeppertia roseopicta</i> (Linden) Borchs. & S. Suárez	GOEPP_ROS	<i>Goeppertia roseopicta</i> (Linden) Borchs. & S. Suárez	<i>Calathea roseopicta</i> (Linden) Regel
CALAT_WAR	<i>Calathea warscewiczii</i> (Klotzsch) Körn.	<i>Calathea warscewiczii</i> (Mathieu ex Planch.) Körn.	GOEPP_WAR	<i>Goeppertia warscewiczii</i> (L. Mathieu ex Planch.) Borchs. & S. Suárez	<i>Calathea warscewiczii</i> (L. Mathieu ex Planch.) Planch. & Linden

31. *The TC is invited to consider:*

(a) a proposal to revise document UPOV/INF/23 “UPOV Code System” to clarify the maximum number of characters to be used in the appended element to UPOV codes, as set out in paragraphs 10 and 11 of this document;

(b) inviting the TWA and TWV, at their sessions in 2023, to consider the proposal to create variety groups for UPOV codes for *Beta vulgaris* L. ssp. *vulgaris*, as set out in paragraph 18 of this document, respectively;

(c) inviting the TWV, at its session in 2023, to consider the proposal to create variety groups for UPOV codes for *Brassica oleracea*, as set out in paragraph 19 of this document;

(d) inviting the TWA and TWV, at their sessions in 2023, to consider whether to create variety groups for the UPOV code ZEAAA_MAY_MAY, as set out in paragraph 21;

(e) the proposal to delete the UPOV codes HYLOC, HYLOC_COS, HYLOC_GUA, HYLOC_GUN, HYLOC_POL and HYLOC_UND, as set out in paragraph 27 of this document; and

(f) the proposal to delete the UPOV codes CALAT_CRO, CALAT_LOE, CALAT_LRO, CALAT_ROS and CALAT_WAR, as set out in paragraph 30 of this document.

MATTERS FOR INFORMATION

GENIE database

Background

32. 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 information¹¹.

33. 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

34. In 2021, 131 new UPOV codes were created. The total number of UPOV codes in the GENIE database as of December 31, 2021 was 9,342.

	Year										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
New UPOV codes	173	212	209	577	188	173	440	242	243	177	131
Amendments	12	5	47*	37	11	16	1	5	3	44	35
Total UPOV Codes	6,851	7,061	7,251	7,808	7,992	8,149	8,589	8,844	9,077	9,213	9,342

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

TWP checking

35. 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".

36. 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 2022.

37. 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) have been 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 Annex IV to document TWP/6/4 "UPOV information databases" and submit comments to the Office of the Union by December 31, 2022.

Proposals for amending UPOV codes

Replacing complex botanical nomenclature by variety groups

38. 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".

39. On the basis of the conclusions at the TC 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.

¹¹ 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".

UPOV codes for Brassica oleracea

40. On the basis of the conclusions at the TC, the UPOV codes BRASS_OLE_GA and BRASS_OLE_GB will be deleted on January 1, 2023.

UPOV codes for Citrus

41. 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, on January 1, 2023.

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 xaurantium L.	Citrus amara Link; Citrus bigarradia Loisel.; Citrus intermedia hort. ex Tanaka; Citrus taitensis Risso; Citrus vulgaris Risso; Citrus xaurantium subsp. aurantium L.; Citrus xaurantium subsp. jambiri Engl.; Citrus xaurantium subsp. keonla Engl.; Citrus xaurantium subsp. suntara Engl.; Citrus xaurantium var. aurantium L.; Citrus xaurantium var. citrina Lush.; Citrus xbigarradia var. volkameriana Risso; Citrus xclementina hort. ex Tanaka; Citrus xcrenatifolia Lush.; Citrus reticulata x 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.			

42. 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 on the said date.

UPOV codes for Zea mays

43. On the basis of the conclusions at the TC, the UPOV code ZEAAA_MAY_SAC, ZEAAA_MAY_EVE and ZEAAA_MAY_MIC will be deleted, on January 1, 2023.

44. *The TC is invited to note:*

(a) *that 131 new UPOV codes were created in 2021 and a total of 9,342 UPOV codes are included in the GENIE database;*

(b) *that the TWV, at its fifty-sixth session, agreed that variety groups should be used to replace complex infra-specific botanical names, such as for Beta vulgaris, Brassica oleracea and Cichorium intybus;*

(c) *the invitation for the Netherlands to further develop the proposal to create variety groups for Beta vulgaris, Brassica oleracea and Cichorium intybus to be presented at the fifty-seventh session of the TWV;*

(d) *the invitation by the TWV for the Office of the Union to develop proposals for revising the UPOV codes with appended information according to the approach to use variety groups for complex botanical names;*

(e) *that the UPOV code CITRU_AUM will be amended to append information to create groups “1MA” for mandarins and “2OR” for oranges, as set out in [paragraph 41](#); and*

(f) *that, on the basis of the conclusions at the TC, at its fifty-seventh session, the UPOV codes BRASS_OLE_GA, BRASS_OLE_GB, CITRU_AUR, CITRU_CLE, CITRU_MRE, CITRU_CRE, CITRU_INT, CITRU_AUR, CITRU_DAV, CITRU_EXC, CITRU_KER, CITRU_BAL, CITRU_KAR, CITRU_BEN, ZEAAA_MAY_SAC, ZEAAA_MAY_EVE and ZEAAA_MAY_MIC will be deleted, as set out in paragraphs 40, 42 and 43, on January 1, 2023, and the members of the Union and contributors of data to the PLUTO database will be informed of the changes by means of a Circular in advance.*

[Annex follows]

ANNEX

AMENDMENTS TO THE UPOV CODES FOR BETA VULGARIS, *BRASSICA OLERACEA*, *CITRUS* AND *ZEA MAYS* AS AGREED AT THE TECHNICAL COMMITTEE, AT ITS FIFTY-SEVENTH SESSION

45. The following amendments to UPOV codes were agreed by the TC at its fifty-seventh session¹² (see document TC/57/25 "Report", paragraphs 69 to 80).

46. The TC noted that members of the Union and contributors of data to the PLUTO database would be informed of the changes to UPOV codes and the date of the changes by means of a circular in advance.

UPOV codes for *Beta vulgaris*

47. The TC, at its fifty-seventh session, agreed to amend the UPOV codes for *Beta vulgaris* L. subsp. *vulgaris*, as reproduced in Appendix I to this Annex.

48. The TC agreed to append information to UPOV codes for *Beta vulgaris* L. subsp. *vulgaris* to establish the following groups:

- (i) Fodder beet group: Class 2.1 ("21FB"),
- (ii) Sugar beet group: Class 2.1 ("21SB"),
- (iii) Beetroot group: Class 2.2 ("22BR"),
- (iv) Leaf beet group: Class 2.2 ("22LB").

49. The TC agreed that information on denomination classes in document UPOV/EXN/DEN "Explanatory notes on variety denominations under the UPOV Convention" would need to be updated as follows:

	<u>Botanical names</u>	<u>UPOV codes</u>
Class 2.1	<i>B. vulgaris</i> L. ssp. <i>vulgaris</i> (synonym to <i>B. vulgaris</i> L. var. <i>alba</i> DC.), <i>B. vulgaris</i> L. ssp. <i>vulgaris</i> (synonym to <i>B. vulgaris</i> L. var. <i>altissima</i>)	BETAA_VUL_VUL_21FB; BETAA_VUL_VUL_21SB
Class 2.2	<i>Beta vulgaris</i> ssp. <i>vulgaris</i> var. <i>conditiva</i> Alef. (synonym to <i>B. vulgaris</i> L. var. <i>rubra</i> L.), <i>B. vulgaris</i> L. var. <i>cicla</i> L., <i>B. vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>vulgaris</i>	BETAA_VUL_VUL_22BR; BETAA_VUL_VUL_22LB
Class 2.3	<i>Beta</i> other than classes 2.1 and 2.2.	other than classes 2.1 and 2.2

UPOV codes for *Brassica oleracea*

50. The TC, at its fifty-seventh session, agreed to amend the botanical names for *Brassica oleracea* in accordance with GRIN, with the consequent changes to the UPOV codes in relation to groups, , as reproduced in Appendix II to this Annex.

51. The TC agreed appending information to the UPOV code for *Brassica oleracea* L. var. *capitata* L. (BRASS_OLE_GC) to create variety groups or types for White and Red Cabbage, as follows:

- (i) White Cabbage: 1W (e.g. BRASS_OLE_GC_1W)
- (ii) Red Cabbage: 2R (e.g. BRASS_OLE_GC_2R)

UPOV codes for *Citrus*

52. The TC, at its fifty-seventh session, agreed to append information to UPOV code CITRU_AUM to create groups "1MA" for mandarins; and "2OR" for oranges.

¹² Held via electronic means on October 25 and 26, 2021

53. The TC agreed to amend the UPOV code CITRU_AUM, following the reclassification of *Citrus clementina* hort. ex *Tanaka* (UPOV code: CITRU_CLE) as a synonym of *Citrus aurantium* L. (UPOV code: CITRU_AUM), as reproduced in Appendix III to this Annex.

54. The TC agreed with the proposal from the TWF for partial revision of the Test Guidelines for *Citrus* to move obsolete species from the “principle botanical names” box to the “alternative botanical names”.

UPOV codes ZEAAA_MAY_SAC, ZEAAA_MAY_EVE and ZEAAA_MAY_MIC

55. The TC, at its fifty-seventh session, agreed to delete the UPOV Codes ZEAAA_MAY_SAC, ZEAAA_MAY_EVE and ZEAAA_MAY_MIC, that would be covered by the UPOV code ZEAAA_MAY_MAY, as reproduced in Appendix IV to this Annex.

56. The TC agreed to append information on variety types or groups to the UPOV code ZEAAA_MAY_MAY to establish the following variety types or groups:

- (i) Corn; Maize: “1MA”,
- (ii) Sweet Corn: “2SW”,
- (iii) Popcorn: “3PO”.

[Appendix I follows]

APPENDIX I to ANNEX

AMENDMENTS TO THE UPOV CODES FOR *BETA VULGARIS* SUBSP. *VULGARIS*
 Agreed by the Technical Committee, at its fifty-seventh session

Old					New		
Entries in PLUTO	TG	UPOV Code	Principal botanical name	Other botanical name(s)	UPOV Code	Principal botanical name	Other botanical name(s)
5	/	BETAA_VUL_GV	Beta vulgaris L. subsp. vulgaris	n.a.	BETAA_VUL_VUL	Beta vulgaris L. subsp. vulgaris	Beta altissima Steud.; Beta brasiliensis hort. ex Voss, nom. inval.; Beta chilensis hort.; Beta cicla (L.) L.; vulgaris f. rhodopleura (Alef.) Helm; vulgaris f. vulgaris L.; vulgaris subsp. cicla (L.) Schübl. & G. Martens; Beta vulgaris subvar. flavescens DC.; Beta vulgaris var. altissima Döll; Beta vulgaris var. cicla L.; Beta vulgaris var. conditiva Alef.; Beta vulgaris var. flavescens (DC.) Mansf.; Beta vulgaris var. rapacea W. D. J. Koch; Beta vulgaris var. rubra DC.; Beta vulgaris var. saccharifera Alef.; Beta vulgaris var. vulgaris L.; Beta vulgaris var.-gr. crassa Alef.
1298	TG/150	BETAA_VUL_GVA	Beta vulgaris L. ssp. vulgaris var. alba DC.	Beta vulgaris L. ssp. vulgaris var. crassa Alef.; Beta vulgaris L. ssp. vulgaris var. crassa Mansf.; Beta vulgaris L. ssp. vulgaris var. rapacea K. Koch			
811	TG/60	BETAA_VUL_GVC	Beta vulgaris L. ssp. vulgaris var. conditiva Alef.	Beta vulgaris L. ssp. vulgaris var. esculenta L.; Beta vulgaris L. ssp. vulgaris var. hortensis			
195	TG/106	BETAA_VUL_GVF	Beta vulgaris L. ssp. vulgaris var. flavescens DC.	Beta vulgaris L. ssp. vulgaris var. cicla (L.) Ulrich; Beta vulgaris L. ssp. vulgaris var. vulgaris			
21799	/	BETAA_VUL_GVS	Beta vulgaris L. ssp. vulgaris var. saccharifera Alef.	Beta vulgaris L. ssp. vulgaris var. altissima Doell			

[Appendix II follows]

APPENDIX II to ANNEX

AMENDMENTS TO THE UPOV CODES FOR *BRASSICA OLERACEA*
Agreed by the Technical Committee, at its fifty-seventh session

Entries in PLUTO	Old			New		
	UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
148	BRASS_OLE	<i>Brassica oleracea</i> L.	n.a.	BRASS_OLE	<i>Brassica oleracea</i> L.	<i>Brassica oleracea</i> L. <i>convar. acephala</i> (DC.) Alef.; <i>Brassica oleracea</i> L. <i>convar. botrytis</i> (L.) Alef.
239	BRASS_OLE_GA	<i>Brassica oleracea</i> L. <i>convar. acephala</i> (DC.) Alef.	n.a.	[to delete]	n.a.	n.a.
21	BRASS_OLE_GAM	<i>Brassica oleracea</i> L. <i>convar. acephala</i> (DC.) Alef. <i>var. medullosa</i> Thell.	<i>Brassica oleracea</i> L. <i>var. medullosa</i> Thell.	BRASS_OLE_GAM	<i>Brassica oleracea</i> L. <i>var. medullosa</i> Thell.	<i>Brassica oleracea</i> L. <i>convar. acephala</i> (DC.) Alef. <i>var. medullosa</i> Thell.
318	BRASS_OLE_GAS	<i>Brassica oleracea</i> L. <i>convar. acephala</i> (DC.) Alef. <i>var. sabellica</i> L.	<i>Brassica oleracea</i> L. <i>var. sabellica</i> L.	BRASS_OLE_GAS	<i>Brassica oleracea</i> L. <i>var. sabellica</i> L.	<i>Brassica oleracea</i> L. <i>convar. acephala</i> (DC.) Alef. <i>var. sabellica</i> L.
132	BRASS_OLE_GAV	<i>Brassica oleracea</i> L. <i>convar. acephala</i> (DC.) Alef. <i>var. viridis</i> L.	<i>Brassica oleracea</i> L. <i>var. viridis</i> L.	BRASS_OLE_GAV	<i>Brassica oleracea</i> L. <i>var. viridis</i> L.	<i>Brassica oleracea</i> L. <i>convar. acephala</i> (DC.) Alef. <i>var. viridis</i> L.
392	BRASS_OLE_GB	<i>Brassica oleracea</i> L. <i>convar. botrytis</i> (L.) Alef.	n.a.	[to delete]	n.a.	n.a.
5,689	BRASS_OLE_GBB	<i>Brassica oleracea</i> L. <i>convar. botrytis</i> (L.) Alef. <i>var. botrytis</i>	<i>Brassica cauliflora</i> lizg	BRASS_OLE_GBB	<i>Brassica oleracea</i> L. <i>var. botrytis</i> L.	<i>Brassica oleracea</i> L. <i>convar. botrytis</i> (L.) Alef. <i>var. botrytis</i> ; <i>Brassica cauliflora</i> lizg
458	BRASS_OLE_GC	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef.	<i>Brassica oleracea</i> L. <i>var. capitata</i> L.	BRASS_OLE_GC	<i>Brassica oleracea</i> L. <i>var. capitata</i> L.	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef.; <i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. capitata</i> (L.) Alef.; <i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. alba</i> DC.; <i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. capitata</i> L. f. <i>alba</i> DC. <i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. rubra</i> (L.) Thell.; <i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. capitata</i> L. f. <i>rubra</i> (L.) Thell.; <i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. alba</i> DC. x <i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. rubra</i> (L.) Thell
6,241	BRASS_OLE_GCA	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. alba</i> DC.	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. capitata</i> L. f. <i>alba</i> DC.	[to delete]	n.a.	n.a.
975	BRASS_OLE_GCR	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. rubra</i> (L.) Thell	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. capitata</i> L. f. <i>rubra</i> (L.) Thell.	[to delete]	n.a.	n.a.
1,284	BRASS_OLE_GCS	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. sabauda</i> L.	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. bullata</i> DC.	BRASS_OLE_GCS	<i>Brassica oleracea</i> L. <i>var. sabauda</i> L.	<i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. sabauda</i> L.; <i>Brassica oleracea</i> L. <i>convar. capitata</i> (L.) Alef. <i>var. bullata</i> DC.

[Appendix III follows]

APPENDIX III to ANNEX

AMENDMENTS TO UPOV CODES FOR *CITRUS*

Agreed by the Technical Committee, at its fifty-seventh session

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	<i>Citrus aurantium</i> L.	n.a.	CITRU_AUM	<i>Citrus xaurantium</i> L.	<i>Citrus amara</i> Link; <i>Citrus bigarradia</i> Loisel.; <i>Citrus intermedia</i> hort. ex Tanaka; <i>Citrus taitensis</i> Risso; <i>Citrus vulgaris</i> Risso; <i>Citrus xaurantium</i> subsp. <i>aurantium</i> L.; <i>Citrus xaurantium</i> subsp. <i>jambiri</i> Engl.; <i>Citrus xaurantium</i> subsp. <i>keonla</i> Engl.; <i>Citrus xaurantium</i> subsp. <i>suntara</i> Engl.; <i>Citrus xaurantium</i> var. <i>aurantium</i> L.; <i>Citrus xaurantium</i> var. <i>citrina</i> Lush.; <i>Citrus xbigarradia</i> var. <i>volkameriana</i> Risso; <i>Citrus xclementina</i> hort. ex Tanaka; <i>Citrus xcrenatifolia</i> Lush.; <i>Citrus reticulata</i> x <i>C. maxima</i>
115	TG/201	CITRU_CLE	<i>Citrus clementina</i> hort. ex Tanaka	n.a.			
1	/	CITRU_MRE	<i>Citrus maxima</i> X <i>Citrus reticulata</i>	n.a.			
0	TG/201	CITRU_CRE	<i>Citrus crenatifolia</i> Lush.	n.a.			
0	TG/204	CITRU_INT	<i>Citrus intermedia</i> hort. ex Tanaka	n.a.			
12	TG/203	CITRU_AUR	<i>Citrus aurantiifolia</i> (Christm.) Swingle	<i>Citrus xjavanica</i> Blume	CITRU_AUR	<i>Citrus xaurantiifolia</i> (Christm.) Swingle	<i>Citrus acida</i> Roxb.; <i>Citrus acida</i> var. <i>acida</i> Roxb.; <i>Citrus aurata</i> Risso; <i>Citrus excelsa</i> var. <i>davaoensis</i> Wester; <i>Citrus grandis</i> Hassk.; <i>Citrus grandis</i> var. <i>grandis</i> Hassk.; <i>Citrus grandis</i> var. <i>oblonga</i> Hassk.; <i>Citrus grandis</i> var. <i>sphaerocarpos</i> Hassk.; <i>Citrus hystrix</i> subsp. <i>acida</i> (Roxb.) Engl.; <i>Citrus lima</i> Lunan; <i>Citrus limetta</i> var. <i>aromatica</i> Wester; <i>Citrus limonellus</i> Hassk.; <i>Citrus limonellus</i> var. <i>limonellus</i> Hassk.; <i>Citrus limonellus</i> var. <i>oxycarpus</i> Hassk.; <i>Citrus medica</i> var. <i>acida</i> (Roxb.) Hook. f.; <i>Citrus xaurantiifolia</i> var. <i>aurantiifolia</i> (Christm.) Swingle; <i>Citrus xdavaoensis</i> (Wester) Tanaka; <i>Citrus xexcelsa</i> Wester; <i>Citrus xjavanica</i> Blume; <i>Limonia aurantiifolia</i> Christm., <i>Citrus medica</i> x <i>C. micrantha</i>
0	TG/203	CITRU_AUA	<i>Citrus aurata</i> Risso	n.a.			
0	TG/203	CITRU_DAV	<i>Citrus davaoensis</i> (Wester) Tanaka	n.a.			
0	TG/203	CITRU_EXC	<i>Citrus excelsa</i> Wester	n.a.			
0	/	CITRU_HYS	<i>Citrus hystrix</i> DC.	n.a.	CITRU_HYS	<i>Citrus hystrix</i> DC.	<i>Citrus auraria</i> Michel; <i>Citrus balincolong</i> (Tanaka) Tanaka; <i>Citrus boholensis</i> (Wester) Tanaka; <i>Citrus celebica</i> Koord.; <i>Citrus celebica</i> var. <i>celebica</i> Koord.; <i>Citrus combara</i> Raf.; <i>Citrus echinata</i> St.-Lag.; <i>Citrus hyalopulpa</i> Tanaka; <i>Citrus hystrix</i> subsp. <i>hystrix</i> DC.; <i>Citrus hystrix</i> var. <i>balincolong</i> Tanaka; <i>Citrus hystrix</i> var. <i>boholensis</i> Wester; <i>Citrus hystrix</i> var. <i>hystrix</i> DC.; <i>Citrus kerrii</i> (Swingle) Tanaka; <i>Citrus latipes</i> Hook. f. & Thomson; <i>Citrus macroptera</i> var. <i>annamensis</i> Tanaka; <i>Citrus macroptera</i> var. <i>kerrii</i> Swingle; <i>Citrus papeda</i> Miq.; <i>Citrus papuana</i> F. M. Bailey; <i>Citrus torosa</i> Blanco; <i>Citrus vitiensis</i> Tanaka; <i>Fortunella sagittifolia</i> K. M. Feng & P. I Mao; <i>Papeda rumphii</i> Hassk.
0	TG/203	CITRU_KER	<i>Citrus kerrii</i> (Swingle) Tanaka	<i>Citrus hyalopulpa</i> Tanaka			
149	TG/203	CITRU_LIM	<i>Citrus xlimon</i> (L.) Osbeck	<i>Citrus limon</i> (L.) Burm. f.; <i>Citrus medica</i> var. <i>limon</i> L.; <i>Citrus rissoi</i> Risso; <i>Citrus xlimonia</i> Osbeck; <i>Citrus xmellarosa</i> Risso; <i>Citrus xvolkameriana</i> (Risso) V. Ten. & Pasq.	CITRU_LIM	<i>Citrus xlimon</i> (L.) Osbeck	<i>Citrus balotina</i> Poit. & Turpin; <i>Citrus bergamota</i> Raf.; <i>Citrus karna</i> Raf.; <i>Citrus limonum</i> Risso; <i>Citrus medica</i> var. <i>limon</i> L.; <i>Citrus rissoi</i> Risso; <i>Citrus xlimon</i> (L.) Burm. f.; <i>Citrus xlimonia</i> Osbeck; <i>Citrus xmellarosa</i> Risso; <i>Citrus xvolkameriana</i> (Risso) V. Ten. & Pasq.; a hybrid of <i>Citrus xaurantium</i> (<i>C. maxima</i> x <i>C. reticulata</i>) x <i>C. medica</i>
0	TG/203	CITRU_BAL	<i>Citrus balotina</i> Poit. & Turpin	n.a.			
0	TG/203	CITRU_KAR	<i>Citrus karna</i> Raf.	n.a.			
355	TG/201	CITRU_RET	<i>Citrus reticulata</i> Blanco	n.a.	CITRU_RET	<i>Citrus reticulata</i> Blanco	<i>Citrus benikoji</i> hort. ex Tanaka; <i>Citrus daoixianensis</i> S. W. He & G. F. Liu; <i>Citrus depressa</i> var. <i>vangasay</i> (Bojer) H. Perrier; <i>Citrus nobilis</i> Andrews; <i>Citrus vangasay</i> Bojer
0	TG/201	CITRU_BEN	<i>Citrus benikoji</i> hort. ex Tanaka	n.a.			

[Appendix IV follows]

APPENDIX IV to ANNEX

AMENDMENTS TO UPOV CODES FOR *CITRUS*

Agreed by the Technical Committee, at its fifty-seventh session

Entries in PLUTO	Current			Proposal		
	UPOV code	Principal botanical name	Other botanical name(s)	UPOV code	Principal botanical name	Other botanical name(s)
1,837	ZEAAA_MAY_SAC	<i>Zea mays</i> L. <i>saccharata</i> Koern.	n.a.	[to delete]	n.a.	n.a.
85	ZEAAA_MAY_EVE	<i>Zea mays</i> L. var. <i>everta</i> (Praecox) Sturt.	n.a.	[to delete]	n.a.	n.a.
100	ZEAAA_MAY_MIC	<i>Zea mays</i> L. convar. <i>microsperma</i> Koern.	n.a.	[to delete]	n.a.	n.a.
764	ZEAAA_MAY_MAY	<i>Zea mays</i> L. subsp. <i>mays</i>	<i>Zea mays</i> var. <i>ceratina</i> L.; <i>Zea mays</i> var. <i>indentata</i> (Sturtev.) L. H. Bailey; <i>Zea mays</i> var. <i>indurata</i> (Sturtev.) L. H. Bailey; <i>Zea mays</i> var. <i>saccharata</i> (Sturtev.) L. H. Bailey	ZEAAA_MAY_MAY	<i>Zea mays</i> L. subsp. <i>mays</i>	<i>Zea mays</i> var. <i>ceratina</i> L.; <i>Zea mays</i> var. <i>indentata</i> (Sturtev.) L. H. Bailey; <i>Zea mays</i> var. <i>indurata</i> (Sturtev.) L. H. Bailey; <i>Zea mays</i> var. <i>saccharata</i> (Sturtev.) L. H. Bailey; <i>Zea mays</i> L. <i>saccharata</i> Koern.; <i>Zea mays</i> L. var. <i>everta</i> (Praecox) Sturt.; <i>Zea mays</i> L. convar. <i>microsperma</i> Koern.

[End of Appendix IV and of document]