|  |  |
| --- | --- |
|  | E |
| International Union for the Protection of New Varieties of Plants |  |

|  |  |
| --- | --- |
| Technical Working Party for Vegetables  Fifty-Sixth Session  Virtual meeting, April 18 to 22, 2022  Technical Working Party for Agricultural Crops  Fifty-First Session  Cambridge, United Kingdom, May 23 to 27, 2022  Technical Working Party for Ornamental Plants and Forest Trees  Fifty-Fourth Session  Hanover, Germany, June 13 to 17, 2022  Technical Working Party for Fruit Crops  Fifty-Third Session  Virtual meeting, July 11 to 15, 2022  Technical Working Party on Testing Methods and Techniques  First Session  Virtual meeting, September 19 to 23, 2022 | TWP/6/4  Original: English  Date: April 13, 2022 |

**UPOV information databases**

*Document prepared by the Office of the Union*

*Disclaimer: this document does not represent UPOV policies or guidance*

Executive summary

The purpose of this document is to report developments concerning the GENIE database and UPOV codes; the PLUTO database; and request the checking of amended UPOV codes or used in the PLUTO database for the first time.

The TWPs are invited to:

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

(b) note the amendments agreed by the TC, at its fifty-seventh session, to the UPOV codes for *Beta vulgaris, Brassica oleracea, Citrus, Zea mays, Aloe aristata* and *Dicentra spectabilis* as set out in paragraphs 15 to 26 of this document;

(c) note 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;

(d) 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 this document and submit comments to the Office of the Union by December 31, 2022.

(e) note the summary of data contributions from members of the Union to the PLUTO database from 2017 to 2021, as presented in the Annex V to this document.

The TWF and TWO are invited to consider:

(a) the proposal to delete the UPOV Codes *HYLOC, HYLOC\_COS, HYLOC\_GUA, HYLOC\_GUN, HYLOC\_POL and HYLOC\_UND*, as set out in paragraph 34 of this document;

The TWO is invited to consider:

(a) the proposal to delete the UPOV Codes CALAT\_CRO, CALAT\_LOE, CALAT\_LRO, CALAT\_ROS and CALAT\_WAR, as set out in paragraph 38 of this document;

The structure of this document is as follows:

Executive summary 1

GENIE DATABASE 2

Background 2

UPOV Code System 3

UPOV code developments 3

proposals for Amending UPOV codes 3

UPOV codes for *Beta vulgaris* 3

UPOV codes for *Brassica oleracea* 4

UPOV codes for *Citrus* 4

UPOV codes ZEAAA\_MAY\_SAC, ZEAAA\_MAY\_EVE and ZEAAA\_MAY\_MIC 4

UPOV code for *Aloe aristata* 4

UPOV code for *Dicentra* species 5

Proposed amendments for consideration by the TWF and TWO in 2022 5

TWP checking 8

PLUTO DATABASE 8

Summary of contributions to the PLUTO database from 2017 to 2021 8

ANNEX I Amendments to the UPOV codes for *Beta vulgaris* subsp. *vulgaris*

ANNEX II Amendments to UPOV codes for *Brassica oleracea:*

ANNEX III Amendments to UPOV codes for *Citrus*

ANNEX IV UPOV codes to be checked by the authorities

ANNEX V Report on data contributed to the Plant Variety Database by members of the Union and other contributors

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

# GENIE DATABASE

## Background

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[[1]](#footnote-2).

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 System

The guide to the UPOV code system (document UPOV/INF/23 “UPOV Code System”) was adopted by the Council on September 21, 2021, in the procedure by correspondence, on the basis of document UPOV/INF/23/1 Draft 3 (see document C/55/12 “Outcome of consideration of documents by correspondence”, paragraph 32).

Matters concerning new proposals for the revision of document UPOV/INF/23 “Guide to the UPOV code system” are presented in document TWP/6/1 “Development of guidance and information materials”.

## UPOV code developments

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).

The TWPs are invited to note that 131 new UPOV codes were created in 2021 and a total of 9,342 UPOV codes are included in the GENIE database.

proposals for Amending UPOV codes

The following amendments to UPOV codes were agreed by the TC at its fifty-seventh session (see document TC/57/25 “Report”, paragraphs 69 to 82).

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*

The TC, at its fifty-seventh session[[2]](#footnote-3), agreed to amend the UPOV codes for *Beta vulgaris* L. subsp. *vulgaris*, as reproduced in Annex I to this document.

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”).

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:

|  | Botanical names | UPOV codes |
| --- | --- | --- |
| Class 2.1 | *B. vulgaris* L. ssp. *vulgaris* (synonym to *B. vulgaris* L. var. *alba* DC.), *B. vulgaris* L. ssp. *vulgaris* (synonym to *B. vulgaris* L. var. *altissima)* | BETAA\_VUL\_VUL\_21FB;  BETAA\_VUL\_VUL\_21SB |
| Class 2.2 | *Beta vulgaris* ssp. *vulgaris* var. *conditiva* Alef. (synonym to *B. vulgaris* L. var. *rubra* L.), B. *vulgaris* L. var. *cicla* L., *B. vulgaris* L. ssp. *vulgaris* var. *vulgaris* | BETAA\_VUL\_VUL\_22BR;  BETAA\_VUL\_VUL\_22LB |
| Class 2.3 | *Beta* other than classes 2.1 and 2.2. | other than classes 2.1 and 2.2 |

## UPOV codes for *Brassica oleracea*

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 provided in the Appendix to Annex II of this document.

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*

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.

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 set out in Annex III to this document.

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

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.

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”.

## UPOV code for *Aloe aristata*

The TC agreed to delete the UPOV Code ALOEE\_ARI as follows:

| Current | | | Proposal | | |
| --- | --- | --- | --- | --- | --- |
| UPOV code | Principal botanical name | Other botanical name(s) | UPOV code | Principal botanical name | Other botanical name(s) |
| ALOEE\_ARI | *Aloe aristata* Haw. | *Aristaloe aristata* (Haw.) Boatwr. & J. C. Manning | ARSTL\_ARI | *Aristaloe aristata* (Haw.) Boatwr. & J. C. Manning | *Aloe aristata* Haw. |

## UPOV code for *Dicentra* species

The TC agree to delete the UPOV Code DICEN\_SPE, as follows:

| Current | | | Proposal | | |
| --- | --- | --- | --- | --- | --- |
| UPOV code | Principal botanical name | Other botanical name(s) | UPOV code | Principal botanical name | Other botanical name(s) |
| DICEN\_SPE | *Dicentra spectabilis* (L.) Lem. | *Lamprocapnos spectabilis* (L.) Fukuhara | LAMPO\_SPE | *Lamprocapnos spectabilis* (L.) Fukuhara | *Dicentra spectabilis* (L.) Lem. |

*The TWPs are invited to note:*

*(a) the amendments agreed by the TC, at its fifty-seventh session, to the UPOV codes for Beta vulgaris, Brassica oleracea, Citrus, Zea mays, Aloe aristata and Dicentra spectabilis as set out in paragraphs 15 to 26 of this document; and*

*(b) 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*.

## Proposed amendments for consideration by the TWF and TWO in 2022

The following sections present proposals for amendments to UPOV codes for consideration by the TWF and TWO at their session in 2021.

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”.

The conclusions at the TWF and TWO as indicated in the following sections, for amendments to UPOV codes, will be presented at the fifty-eighth session of the TC.

On the basis of the conclusions at the fifty-eighth session of 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*

Background

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

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 | *Hylocereus* (A. Berger) Britton & Rose | n.a. | Asian bleeding-heart; Bleeding-heart | 0 |
| HYLOC\_COS | *Hylocereus costaricensis* (F. A. C. Weber) Britton & Rose | n.a. |  | 0 |
| HYLOC\_GUA | *Hylocereus guatemalensis* (Eichlam) Britton & Rose | n.a. |  | 0 |
| HYLOC\_GUN | hybrids between *Hylocereus guatemalensis* (Eichlam) Britton & Rose and *Hylocereus undatus* (Haw.) Britton et Rose | n.a. |  | 1 |
| HYLOC\_POL | *Hylocereus polyrhizus* (F. A. C. Weber) Britton & Rose | n.a. | pitahaya | 0 |
| HYLOC\_UND | *Hylocereus undatus* (Haw.) Britton & Rose | *Cereus undatus* Haw. | belle-of-the-night; dragon-fruit; moonlight cactus; night-blooming cereus; queen-of-the-night; red pitaya; strawberry-pear | 23 |

Proposal

In accordance with the reclassification of certain *Hylocereus* species *to Selenicereus*, the TWF and TWO are invited to consider the deletion of the UPOV codes HYLOC, HYLOC\_COS, HYLOC\_GUA, HYLOC\_GUN, HYLOC\_POL and HYLOC\_UND. *Hylocereus, Hylocereus costaricensis, Hylocereus guatemalensis, hybrids between Hylocereus guatemalensis* and *Hylocereus undatus, Hylocereus polyrhizus,* and *Hylocereus undatus* would be covered as synonym of *Selenicereus, Selenicereus, Selenicereus guatemalensis,* Hybrids between *Selenicereus guatemalensis* and *Selenicereus undatus, Selenicereus monacanthus,* and *Selenicereus undatus* under new UPOV codesSELEN, SELEN\_COS, SELEN\_GUA, SELEN\_GUN, SELEN\_POL and SELEN\_UND, respectively, which the Office of the Union would create, as follows:

| Current | | | Proposal | | |
| --- | --- | --- | --- | --- | --- |
| UPOV code | Principal botanical name | Other botanical name(s) | UPOV code | Principal botanical name | Other botanical name(s) |
| HYLOC | *Hylocereus* (A. Berger) Britton & Rose | n.a. | SELEN | *Selenicereus* (A. Berger) Britton & Rose | *Hylocereus* (A. Berger) Britton & Rose |
| HYLOC\_COS | *Hylocereus costaricensis* (F. A. C. Weber) Britton & Rose | n.a. | SELEN\_COS | *Selenicereus costaricensis* (F. A. C. Weber) S. Arias & N. Korotkova | *Hylocereus costaricensis* (F. A. C. Weber) Britton & Rose |
| HYLOC\_GUA | *Hylocereus guatemalensis* (Eichlam) Britton & Rose | n.a. | SELEN\_GUA | *Selenicereus guatemalensis* (Eichlam ex Weing.) D. R. Hunt | *Hylocereus guatemalensis* (Eichlam) Britton & Rose |
| HYLOC\_GUN | hybrids between *Hylocereus guatemalensis* (Eichlam) Britton & Rose and *Hylocereus undatus* (Haw.) Britton et Rose | n.a. | SELEN\_GUN | Hybrids between *Selenicereus guatemalensis* (Eichlam) Britton & Rose and S*elenicereus undatus* (Haw.) Britton et Rose | hybrids between *Hylocereus guatemalensis* (Eichlam) Britton & Rose and *Hylocereus undatus* (Haw.) Britton et Rose |
| HYLOC\_POL | *Hylocereus polyrhizus* (F. A. C. Weber) Britton & Rose | n.a. | SELEN\_POL | *Selenicereus monacanthus* (Lem.) D. R. Hunt | *Hylocereus polyrhizus* (F. A. C. Weber) Britton & Rose |
| HYLOC\_UND | *Hylocereus undatus* (Haw.) Britton & Rose | *Cereus undatus* Haw. | SELEN\_UND | *Selenicereus undatus* (Haw.) D. R. Hunt | *Cereus undatus* Haw. |

*The TWF and TWO are invited to consider the proposal to delete the UPOV Codes HYLOC, HYLOC\_COS, HYLOC\_GUA, HYLOC\_GUN, HYLOC\_POL and HYLOC\_UND, as set out in paragraph 34 of this document.*

*UPOV code for Calathea species*

Background

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

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 | *Calathea* G.F.W. Mey. | n.a. | n.a. | 65 |
| CALAT\_CRO | *Calathea crocata* E. Morren & Joriss. | *Goeppertia crocata* (É. Morren & Joriss.) Borchs. & S. Suárez | n.a. | 8 |
| CALAT\_ECU | *Calathea ecuadoriana* H. A. Kenn. | n.a. | n.a. | 1 |
| CALAT\_LIE | *Calathea lietzei* E. Morren | n.a. | n.a. | 7 |
| CALAT\_LOE | *Calathea loeseneri* J. F. Macbr. | n.a. | n.a. | 0 |
| CALAT\_LRO | *Calathea loeseneri* J. F. Macbr. X *Calathea roseopicta* (Linden) Regel | n.a. | n.a. | 5 |
| CALAT\_ROS | *Calathea roseopicta* (Linden) Regel | *Goeppertia roseopicta* (Linden) Borchs. & S. Su rez | n.a. | 22 |
| CALAT\_WAR | *Calathea warscewiczii* (Klotzsch) Körn. | *Calathea warscewiczii* (Mathieu ex Planch.) Körn. | n.a. | 3 |

Proposal

In accordance with the reclassification of certain *Calathea species to Goeppertia*, the TWO is invited to consider deletion of the UPOV codes CALAT\_CRO, CALAT\_LOE, CALAT\_LRO, CALAT\_ROS and CALAT\_WAR. *Calathea crocata, Calathea loeseneri, Calathea loeseneri, x Calathea roseopicta, Calathea roseopicta, and Calathea warscewiczii* would be covered as synonym of *Goeppertia, Goeppertia, Goeppertia loeseneri × Goeppertia roseopicta, Goeppertia roseopicta,* and *Goeppertia warscewiczii* under new UPOV codesGOEPP\_CRO, GOEPP\_LOE, GOEPP\_LRO, GOEPP\_ROS and GOEPP\_WAR, respectively, which the office of the union would create, 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\_LRO | Calathea loeseneri J. F. Macbr. X Calathea roseopicta (Linden) Regel | n.a. | GOEPP\_LRO | *Goeppertia loeseneri* (J. F. Macbr.) Borchs. & S. Suárez × *Goeppertia roseopicta* (Linden) Borchs. & S. Suárez | n.a. |
| 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 |

*The TWO is invited to consider the proposal to delete the UPOV Codes* CALAT\_CRO, CALAT\_LOE, CALAT\_LRO, CALAT\_ROS and CALAT\_WAR*, as set out in paragraph 38 of this document.*

## TWP checking

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”.

In accordance with the procedure set out in Section 3.3 of the Guide to the UPOV Code System, the Office of the Union prepares tables of UPOV code additions and amendments, for checking by the relevant authorities, for each of the Technical Working Party (TWP) sessions in 2022.

The Excel files in Annex IV to this document provide information on new UPOV codes added to the GENIE database and UPOV code amendments that have not yet been checked by the relevant authorities, as follows:

“Part A, ‘UPOV codes amendments to be checked’:

for each change, the old entry is highlighted in the row in red and the changes to the entry are found in the line immediately below that highlighted row (they have the same number in the first column). All Technical Working Parties and Authority(ies) are requested to check the amendments whether the amendments follow UPOV code system, reflects authentic botanical names and/or common names (see “Guide to the UPOV Code System” http://www.upov.int/export/sites/upov/genie/en/pdf/upov\_code\_system.pdf).

“Part B ‘New UPOV codes or new information’:

contains the new UPOV codes or new information added for existing UPOV codes. Highlighting in grey indicates that the UPOV code or name has not been changed. In this spreadsheet, the column headers highlighted in yellow indicate the relevant Technical Working Party (TWP) and Authority(ies) of interest which are requested to check the correctness of the information.”

“Part C ‘Crop type(s) of existing UPOV codes used in the PLUTO database for the first time’:

contains the new crop type allocation or amended allocation for existing UPOV codes used in the PLUTO database for the first time. In this spreadsheet, the column headers highlighted in yellow indicate the relevant crop type(s) which are requested to check the correctness of the information.”

Annex IV to this document contain parts A “UPOV codes amendments to be checked”, B “New UPOV codes or new information”, and C “Crop type(s) of UPOV codes used in the PLUTO database for the first time”. The Excel format files are available on the TWV/56, TWO/54, TWA/51, TWF/53 and TWM/1 websites.

The TWPs 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 Annex IV to this document and submit comments to the Office of the Union by December 31, 2022.

PLUTO DATABASE

## Summary of contributions to the PLUTO database from 2017 to 2021

Annex V to this document provides a summary of data contributions from members of the Union to the PLUTO database from 2017 to 2021.

The TWPs are invited to note the summary of data contributions from members of the Union to the PLUTO database from 2017 to 2021, as presented in the Annex V to this document.

[Annexes follow]

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\_**G**VA | 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\_**G**VC | 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\_**G**VF | 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\_**G**VS | Beta vulgaris L. ssp. vulgaris var. saccharifera Alef. | Beta vulgaris L. ssp. vulgaris var. altissima Doell |

[Annex II follows]

AMENDMENTS TO THE UPOV CODES FOR *BRASSICA OLERACEA*

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Old | | | New | | |
| UPOV code | Principal botanical name | Other botanical name(s) | UPOV code | Principal botanical name | Other botanical name(s) |
| BRASS\_OLE | *Brassica oleracea* L. | n.a. | BRASS\_OLE | *Brassica oleracea* L. | *Brassica oleracea* L. *convar. acephala* (DC.) Alef.;  *Brassica oleracea* L. convar. *botrytis* (L.) Alef. |
| BRASS\_OLE\_GA | *Brassica oleracea* L. *convar. acephala* (DC.) Alef. | n.a. | [to delete] | n.a. | n.a. |
| BRASS\_OLE\_GAM | *Brassica oleracea* L. *convar. acephala* (DC.) Alef. *var. medullosa* Thell. | *Brassica oleracea* L. var. *medullosa* Thell. | BRASS\_OLE\_GAM | *Brassica oleracea* L. var. *medullosa* Thell. | *Brassica oleracea* L. *convar. acephala* (DC.) Alef. *var. medullosa* Thell. |
| BRASS\_OLE\_GAS | *Brassica oleracea* L. *convar. acephala (DC.)* Alef. var. *sabellica* L. | *Brassica oleracea* L. var. *sabellica* L. | BRASS\_OLE\_GAS | *Brassica oleracea* L.var. *sabellica* L. | *Brassica oleracea* L. *convar. acephala (DC.)* Alef. var. *sabellica* L. |
| BRASS\_OLE\_GAV | *Brassica oleracea* L. *convar. acephala* (DC.) Alef. var. *viridis* L. | *Brassica oleracea* L.var. *viridis* L. | BRASS\_OLE\_GAV | *Brassica oleracea* L.var. *viridis* L. | *Brassica oleracea* L. *convar. acephala* (DC.) Alef. var. *viridis* L. |
| BRASS\_OLE\_GB | *Brassica oleracea* L. convar. *botrytis* (L.) Alef. | n.a. | [to delete] | n.a. | n.a. |
| BRASS\_OLE\_GBB | *Brassica oleracea* L. *convar. botrytis* (L.) Alef. var. *botrytis* | *Brassica cauliflora* lizg | BRASS\_OLE\_GBB | *Brassica oleracea* L. var. *botrytis* L. | *Brassica oleracea* L. *convar. botrytis* (L.) Alef. var. *botrytis;*  *Brassica cauliflora lizg* |
| BRASS\_OLE\_GC | *Brassica oleracea* L. convar. *capitata* (L.) Alef. | *Brassica oleracea* L. var. *capitata* L. | BRASS\_OLE\_GC | *Brassica oleracea* L.var. *capitata* L. | *Brassica oleracea* L. convar. *capitata* (L.) Alef.;  *Brassica oleracea* L. convar. *capitata* (L.) Alef. var. *capitata* (L.) Alef.*;*  *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. *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. convar. *capitata* (L.) Alef. var. *alba* DC. x *Brassica oleracea L. convar. capitata* (L.) Alef. var. *rubra* (L.) Thell |
| 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. | [to delete] | n.a. | n.a. |
| 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. | [to delete] | n.a. | n.a. |
| BRASS\_OLE\_GCS | *Brassica oleracea* L.convar. *capitata* (L.) Alef. var. *sabauda* L. | *Brassica oleracea* L. convar. *capitata (L.)* Alef. var. *bullata* DC. | BRASS\_OLE\_GCS | *Brassica oleracea* L.var. *sabauda* L. | *Brassica oleracea* L.convar. *capitata* (L.) Alef. var. *sabauda* L. ;  *Brassica oleracea* L. convar. *capitata (L.)* Alef. var. *bullata* DC. |

[Annex III follows]

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 | Citrus aurantium L. | n.a. | CITRU\_AUM | 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. |
| 12 | TG/203 | CITRU\_AUR | Citrus aurantiifolia (Christm.) Swingle | Citrus ×javanica Blume | CITRU\_AUR | Citrus ×aurantiifolia (Christm.) Swingle | Citrus acida Roxb.; Citrus acida var. acida Roxb.; Citrus aurata Risso; Citrus excelsa var. davaoensis Wester; Citrus grandis Hassk.; Citrus grandis var. grandis Hassk.; Citrus grandis var. oblonga Hassk.; Citrus grandis var. sphaerocarpos Hassk.; Citrus hystrix subsp. acida (Roxb.) Engl.; Citrus lima Lunan; Citrus limetta var. aromatica Wester; Citrus limonellus Hassk.; Citrus limonellus var. limonellus Hassk.; Citrus limonellus var. oxycarpus Hassk.; Citrus medica var. acida (Roxb.) Hook. f.; Citrus ×aurantiifolia var. aurantiifolia (Christm.) Swingle; Citrus ×davaoensis (Wester) Tanaka; Citrus ×excelsa Wester; Citrus ×javanica Blume; Limonia aurantiifolia Christm., Citrus medica × C. micrantha |
| 0 | TG/203 | CITRU\_AUA | Citrus aurata Risso | n.a. |
| 0 | TG/203 | CITRU\_DAV | Citrus davaoensis (Wester) Tanaka | n.a. |
| 0 | TG/203 | CITRU\_EXC | Citrus excelsa Wester | n.a. |
| 0 | / | CITRU\_HYS | Citrus hystrix DC. | n.a. | CITRU\_HYS | Citrus hystrix DC. | Citrus auraria Michel; Citrus balincolong (Tanaka) Tanaka; Citrus boholensis (Wester) Tanaka; Citrus celebica Koord.; Citrus celebica var. celebica Koord.; Citrus combara Raf.; Citrus echinata St.-Lag.; Citrus hyalopulpa Tanaka; Citrus hystrix subsp. hystrix DC.; Citrus hystrix var. balincolong Tanaka; Citrus hystrix var. boholensis Wester; Citrus hystrix var. hystrix DC.; Citrus kerrii (Swingle) Tanaka; Citrus latipes Hook. f. & Thomson; Citrus macroptera var. annamensis Tanaka; Citrus macroptera var. kerrii Swingle; Citrus papeda Miq.; Citrus papuana F. M. Bailey; Citrus torosa Blanco; Citrus vitiensis Tanaka; Fortunella sagittifolia K. M. Feng & P. I Mao; Papeda rumphii Hassk. |
| 0 | TG/203 | CITRU\_KER | Citrus kerrii (Swingle) Tanaka | Citrus hyalopulpa Tanaka |
| 149 | TG/203 | CITRU\_LIM | Citrus ×limon (L.) Osbeck | Citrus limon (L.) Burm. f.; Citrus medica var. limon L.; Citrus rissoi Risso; Citrus ×limonia Osbeck; Citrus ×mellarosa Risso; Citrus ×volkameriana (Risso) V. Ten. & Pasq. | CITRU\_LIM | Citrus ×limon (L.) Osbeck | Citrus balotina Poit. & Turpin; Citrus bergamota Raf.; Citrus karna Raf.; Citrus limonum Risso; Citrus medica var. limon L.; Citrus rissoi Risso; Citrus ×limon (L.) Burm. f.; Citrus ×limonia Osbeck; Citrus ×mellarosa Risso; Citrus ×volkameriana (Risso) V. Ten. & Pasq.; a hybrid of Citrus × aurantium (C. maxima × C. reticulata) × C. medica |
| 0 | TG/203 | CITRU\_BAL | Citrus balotina Poit. & Turpin | n.a. |
| 0 | TG/203 | CITRU\_KAR | Citrus karna Raf. | n.a. |
| 355 | TG/201 | CITRU\_RET | Citrus reticulata Blanco | n.a. | CITRU\_RET | Citrus reticulata Blanco | Citrus benikoji hort. ex Tanaka; Citrus daoxianensis S. W. He & G. F. Liu; Citrus depressa var. vangasay (Bojer) H. Perrier; Citrus nobilis Andrews; Citrus vangasay Bojer |
| 0 | TG/201 | CITRU\_BEN | Citrus benikoji hort. ex Tanaka | n.a. |

[Annex IV follows]

[See Excel files]

[Annex V follows]

REPORT ON DATA CONTRIBUTED TO THE PLANT VARIETY DATABASE BY MEMBERS OF THE UNION AND OTHER CONTRIBUTORS AND ASSISTANCE FOR DATA CONTRIBUTION

| Contributor | Number of applications for PBR in 2020 | Number of new data submissions to PLUTO in 2017 | Number of new data submissions to PLUTO in 2018 | Number of new data submissions to PLUTO in 2019 | Number of new data submissions to PLUTO in 2020 | Number of new data submissions to PLUTO in 2021 |
| --- | --- | --- | --- | --- | --- | --- |
| African Intellectual Property Organization | 0 | 0 | 0 | 0 | 0 | 0 |
| Albania | n.a. | 0 | 1 | 0 | 0 | 0 |
| Argentina | 448 | 0 | 0 | 2 | 4 | 8 |
| Australia | 316 | 5 | 22 | 20 | 21 | 6 |
| [[3]](#footnote-4)\*Austria | 0 | 4 | 5 | 5 | 3 | 5 |
| Azerbaijan | n.a. | 0 | 0 | 0 | 0 | 0 |
| Belarus | 25. | 0 | 0 | 0 | 0 | 2 |
| \*Belgium | 2 | 3 | 5 | 6 | 5 | 7 |
| Bolivia (Plurinational State of) | n.a. | 0 | 0 | 0 | 0 | 1 |
| Bosnia and Herzegovina | n.a. | 0 | 0 | 0 | 0 | 0 |
| Brazil | 335 | 3 | 5 | 11 | 11 | 11 |
| \*Bulgaria | 26 | 3 | 4 | 10 | 10 | 6 |
| Canada | 338 | 11 | 10 | 12 | 12 | 10 |
| Chile | 79 | 5 | 7 | 6 | 4 | 4 |
| China | 8,960 | 1 | 0 | 1 | 1[[4]](#footnote-5)\*\* | 3 |
| Colombia | 128 | 2 | 0 | 1 | 0 | 0 |
| Costa Rica | 7 | 2 | 1 | 3 | 1 | 0 |
| \*Croatia | 8 | 2 | 2 | 2 | 2 | 4 |
| \*Czech Republic | 37 | 9 | 6 | 6 | 8 | 7 |
| \*Denmark | 10 | 10 | 7 | 11 | 11 | 13 |
| Dominican Republic | n.a. | 0 | 0 | 0 | 0 | 1 |
| Ecuador | 78 | 1 | 1 | 0 | 0 | 0 |
| Egypt | 34 | n.a. | n.a. | n.a. | 0 | 0 |
| \*Estonia | 10 | 3 | 9 | 6 | 7 | 7 |
| \*European Union | 3,427 | 7 | 11 | 8 | 12 | 8 |
| \*Finland | 6 | 2 | 3 | 1 | 3 | 3 |
| \*France | 93 | 8 | 8 | 12 | 12 | 11 |
| Georgia | 17 | 0 | 3 | 0 | 0 | 1 |
| \*Germany | 33 | 8 | 9 | 11 | 9 | 13 |
| \*Hungary | 26 | 14 | 11 | 16 | 13 | 14 |
| \*Iceland | n.a. | 0 | 0 | 0 | 0 | 0 |
| \*Ireland | 6 | 1 | 2 | 2 | 3 | 3 |
| Israel | 88 | 1 | 0 | 8 | 2 | 2 |
| \*Italy | 3 | 6 | 3 | 4 | 5 | 2 |
| Japan | 713 | 2 | 3 | 4 | 1 | 1 |
| Jordan | 21 | 0 | 0 | 0 | 0 | 0 |
| Kenya | 63 | 0 | 0 | 0 | 0 | 0 |
| Kyrgyzstan | 3 | 0 | 0 | 0 | 0 | 0 |
| \*Latvia | 6 | 2 | 2 | 1 | 1 | 2 |
| \*Lithuania | 4 | 4 | 3 | 4 | 5 | 3 |
| Mexico | 250 | 3 | 4 | 2 | 3 | 2 |
| Montenegro | n.a. | 0 | 0 | 0 | 0 | 0 |
| Morocco | 63 | 0 | 0 | 1 | 0 | 0 |
| \*Netherlands | 837 | 8 | 9 | 11 | 11 | 12 |
| New Zealand | 94 | 6 | 6 | 6 | 6 | 1 |
| Nicaragua | 6 | 0 | 0 | 0 | 2 | 1 |
| North Macedonia | n.a. | 0 | 0 | 0 | 0 | 0 |
| \*Norway | 23 | 4 | 7 | 6 | 4 | 5 |
| Oman | n.a. | 2 | 0 | 0 | 0 | 0 |
| Panama | n.a. | 1 | 0 | 0 | 0 | 0 |
| Paraguay | 21 | 0 | 1 | 0 | 0 | 0 |
| Peru | 43 | 1 | 1 | 1 | 0 | 0 |
| \*Poland | 148 | 7 | 3 | 3 | 4 | 3 |
| \*Portugal | 0 | 1 | 2 | 1 | 4 | 3 |
| Republic of Korea | 729 | 0 | 1 | 4 | 3 | 1 |
| Republic of Moldova | 31 | 1 | 2 | 7 | 2 | 1 |
| \*Romania | 50 | 4 | 4 | 5 | 4 | 5 |
| Russian Federation | 800 | 5 | 4 | 3 | 1 | 0 |
| Serbia | 63 | 2 | 4 | 1 | 2 | 0 |
| Singapore | 4 | 0 | 0 | 0 | 0 | 3 |
| \*Slovakia | 9 | 6 | 4 | 4 | 3 | 0 |
| \*Slovenia | 0 | 3 | 4 | 4 | 2 | 6 |
| South Africa | 275 | 2 | 2 | 3 | 1 | 2 |
| \*Spain | 66 | 5 | 4 | 4 | 7 | 1 |
| \*Sweden | 3 | 11 | 9 | 9 | 10 | 6 |
| \*Switzerland | 93 | 6 | 3 | 6 | 8 | 7 |
| Trinidad and Tobago | n.a. | 0 | 0 | 0 | 0 | 7 |
| Tunisia | 18 | 0 | 0 | 0 | 0 | 0 |
| \*Turkey | 282 | 0 | 2 | 1 | 0 | 0 |
| Ukraine | 1,260 | 0 | 3 | 11 | 4 | 1 |
| \*United Kingdom | 130 | 10 | 12 | 10 | 9 | 4 |
| United Republic of Tanzania | 6 | 0 | 0 | 0 | 0 | 10 |
| United States of America | 1,432 | 12 | 12 | 16 | 6 | 0 |
| Uruguay | 45 | 0 | 0 | 0 | 1 | 4 |
| Uzbekistan | 122 | 0 | 1 | 0 | 0 | 1 |
| Saint Vincent and the Grenadines | n.a. | n.a. | n.a. | n.a. | n.a. | 0 |
| Viet Nam | 256 | 0 | 0 | 0 | 0 | 0 |
| OECD | - | 2 | 2 | 2 | 2 | 0 |

[End of Annex V and of document]

1. 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”. [↑](#footnote-ref-2)
2. Held via electronic means on October 25 and 26, 2021 [↑](#footnote-ref-3)
3. \* Data provided via the CPVO. [↑](#footnote-ref-4)
4. \*\* China – Ministry of Agriculture and Rural Affairs (MARA): 1  
   China – National Forestry and Grassland Administration (NFGA): 1 [↑](#footnote-ref-5)