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**TECHNICAL WORKING PARTY ON AUTOMATION AND
COMPUTER PROGRAMS**

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VARIETY DENOMINATIONS

Document prepared by the Office of the Union

1. The purpose of this document is to report on:
 - (a) the adoption by the Council of the revision of document UPOV/INF/12 “Explanatory Notes on Variety Denominations under the UPOV Convention” (document UPOV/INF/12/2);
 - (b) a proposal for a future revision of document UPOV/INF/12 Annex I, Part I “Classes within a genus” (reproduced in the Annex to this document), with regard to Class 4.1 *Solanum tuberosum* L. / Class 4.2 *Solanum* other than Class 4.1; and
 - (c) a proposal for a future revision of document UPOV/INF/12 Annex I, Part II “Classes encompassing more than one genus” (reproduced in the Annex to this document), with regard to the creation of a new class for *Verbena* and *Glandularia*.

**ADOPTION OF DOCUMENT UPOV/INF/12/2 “EXPLANATORY NOTES ON VARIETY
DENOMINATIONS UNDER THE UPOV CONVENTION” (REVISION)**

2. The Council, at its forty-third ordinary session, held in Geneva on October 22, 2009, noted that the Administrative and Legal Committee (CAJ), at its sixtieth session held in Geneva on October 19, 2009, had endorsed the proposal by the Technical Committee (TC), at

its forty-fifth session, held in Geneva from March 30 to April 1, 2009, that Class 202 in document UPOV/INF/12/1, Annex I, Part II “Classes encompassing more than one genus”, be extended to cover *Megathyrsus*, *Panicum*, *Setaria* and *Steinchisma*, and that Class 211 should be modified to cover all species of *Agaricus*, *Agrocybe*, *Auricularia*, *Dictyophora*, *Flammulina*, *Ganoderma*, *Grifola*, *Hericium*, *Hypsizigus*, *Lentinula*, *Lepista*, *Lyophyllum*, *Meripilus*, *Mycoleptodonoides*, *Naematoloma*, *Panellus*, *Pholiota*, *Pleurotus*, *Polyporus*, *Sparassis* and *Tricholoma*, and that the name of Class 211 should be changed to “Class 211 (Mushrooms)”. The Council adopted document UPOV/INF/12/2 “Explanatory Notes on Variety Denominations under the UPOV Convention” on that basis.

DOCUMENT UPOV/INF/12, ANNEX I, PART I: CLASS 4.1 *SOLANUM TUBEROSUM* L.
/ CLASS 4.2 *SOLANUM* OTHER THAN CLASS 4.1

3. Until 2008, the recognized botanical name for Tomato in the GRIN database¹ was “*Lycopersicon esculentum* Mill.”. On that basis, the UPOV code was established as “LYCOP_ESC” and Tomato followed the General Rule (“one genus / one class”) for variety denomination purposes (see document UPOV/INF/12/2, paragraph 2, Section 2.5.2).

4. However, in September 2008, in response to taxonomic developments, GRIN removed the genus *Lycopersicon* and amended its botanical classification of Tomato to “*Solanum lycopersicum* var. *lycopersicum*”.

5. In accordance with the “Guide to the UPOV Code System” (extract reproduced below), it is proposed that, for UPOV purposes, there be a reclassification of “*Lycopersicon esculentum* Mill.” (UPOV code: LYCOP_ESC) to “*Solanum lycopersicum* var. *lycopersicum*” (UPOV code: SOLAN_LYC_LYC).

(Extract from the “Guide to the UPOV Code System”)
(http://www.upov.int/genie/en/upov_code.html)

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

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

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

[...]

“(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/12/1) contain UPOV variety denomination classes; for genera

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

and species not covered by the List of Classes in Annex I to document UPOV/INF/12/1, the general rule (“one genus / one class”) is that a genus is considered to be a class (see document UPOV/INF/12/1, Section 2.5.2 and its Annex I). Therefore, it is important that the first element of the UPOV code can be used to sort species into the correct genus. The UPOV codes will also be amended if there are consequences for the content of a variety denomination class where the list of classes applies. Amendments to UPOV codes will be handled by the same procedure as the introduction of new UPOV codes as in paragraphs (a) and (b), above. However, in addition, all members of the Union and contributors of data to the Plant Variety Database will be informed of any amendments.”

6. As indicated in the “Guide to the UPOV Code System” (see Section 3.3 (d), reproduced above), such a reclassification would also need to be considered in relation to the variety denomination class. In addition, a number of other species in the UPOV GENIE database, which were previously classified as “*Lycopersicon*”, with corresponding UPOV codes, have also been reclassified and the genus “*Cyphomandra*” was also reclassified within the genus “*Solanum*”. A review of the GENIE database revealed that the following classifications are affected:

<u>GENIE database</u>	<u>UPOV code</u>	<u>GRIN database</u>
<u>Lycopersicon</u>		
<i>Lycopersicon</i>		all species removed
<i>Lycopersicon esculentum</i> Mill.	LYCOP_ESC	<i>Solanum lycopersicum</i> var.
<i>Lycopersicon esculentum</i> Mill. var. <i>esculentum</i>	LYCOP_ESC_ESC	<i>lycopersicum</i>
<i>Lycopersicon esculentum</i> Mill. var. <i>cerasiforme</i> (Dunal) A. Gray	LYCOP_ESC_CER	<i>Solanum lycopersicum</i> var. <i>cerasiforme</i> (Alef.) Fosberg
<i>Lycopersicon hirsutum</i> Dunal	LYCOP_HIR	<i>Solanum habrochaites</i> S. Knapp & D. M. Spooner
<i>Lycopersicon lycopersicum</i> (L.) Karst. ex. Farw. x <i>Lycopersicon hirsutum</i> L.	LYCOP_EHI	no hybrid binomial
<u>Cyphomandra</u>		
<i>Cyphomandra</i>	CYPHO	all species removed
<i>Cyphomandra betacea</i> (Cav.) Sendtn. (synonym <i>Solanum betaceum</i> Cav.)	CYPHO_BET	<i>Solanum betaceum</i> Cav.
<u>Hybrid genus</u>		
<i>Lycopersicon</i> x <i>Cyphomandra</i>	LYCYP	<i>Solanum</i> L.
<i>Lycopersicon lycopersicum</i> x <i>Cyphomandra betacea</i>	LYCYP_EBE	to be investigated

7. It is proposed that corresponding changes would be made to the UPOV codes and variety denomination classes for these genera and species. However, in the case of

Lycopersicon x Cyphomandra, no entries were found in the UPOV-ROM or GENIE database; therefore, the UPOV codes will be deleted.

8. The following information is provided to facilitate the consideration of such a change:

<u>Genus / species</u>	<u>Number of Entries in UPOV-ROM: Version 2009/01</u>
<u>Class: Lycopersicon</u>	
<i>Lycopersicon esculentum</i> Mill. / <i>Lycopersicon lycopersicum</i> (L) (synonyms)	14,245
Lycopersicon (probably <i>Lycopersicon esculentum</i> Mill.)	571
<i>Lycopersicon hirsutum</i>	4
<u>Class: Cyphomandra</u>	
<i>Cyphomandra betacea</i> (Cav.) Sendtn.	5
<u>Class 4.1: Solanum tuberosum L.</u>	
<i>Solanum tuberosum</i> L.	12,925
<u>Class 4.2: Solanum other than class 4.1</u>	
<i>Solanum aviculare</i>	1
<i>Solanum diflorum</i> Vell.	4
<i>Solanum glaucophyllum</i> Desf.	1
<i>Solanum jasminoides</i> Paxt.	4
<i>Solanum</i> L.	59
<i>Solanum melongena</i> L.	945
<i>Solanum muricatum</i>	15
<i>Solanum pseudocapsicum</i>	7
<i>Solanum quitoense</i> Lam.	2
<i>Solanum rantonetii</i>	6
<i>Solanum sisymbriifolium</i> Lam.	7

9. As indicated in the table above, one of the most significant effects of the change of denomination class for tomato would be that it would be moved to the same denomination class as *Solanum melongena* L. (Aubergine).

10. The taxonomic developments concerning the genus *Lycopersicon* and *Cyphomandra* were not known at the time of the sessions of the Technical Working Party for Vegetables (TWV) and the Technical Working Party on Automation and Computer Programs (TWC) held in 2009. However, the developments above were reported to the other Technical Working Parties (TWPs) at their sessions in 2009 and to the CAJ at its sixtieth session.

11. The Technical Working Party for Agricultural Crops (TWA), at its thirty-eighth session, held in Seoul, Republic of Korea, from August 31 to September 4, 2009, proposed that a separate denomination class be created within *Solanum* (e.g. Class 4.3) for Tomato, in order to avoid difficulties for denominations for other species (e.g. *Solanum melongena* L.) within *Solanum* (see document TWA/38/17 “Report”, paragraph 41).

12. The Technical Working Party for Ornamental Plants and Forest Trees (TWO), at its forty-second session, held in Angers, France, from September 14 to 18, 2009, supported the proposal of the TWA, that a separate denomination class for Tomato be created within *Solanum* (e.g. Class 4.3), in order to avoid difficulties for denominations for other species within *Solanum*. It further suggested that a separate denomination class might be considered for *Solanum melongena* L., in order to avoid varieties of ornamental species of *Solanum* L. needing different denominations to varieties of *Solanum melongena* L. (see document TWO/42/18 “Report”, paragraph 58).

13. The Technical Working Party for Fruit Crops (TWF), at its fortieth session, held in Angers, France, from September 21 to 25, 2009, supported the proposal of the TWA, that a separate denomination class for Tomato be created within *Solanum* (e.g. Class 4.3), in order to avoid difficulties for denominations for other species within *Solanum*. It also agreed with the proposal of the TWO that a separate denomination class might be considered for *Solanum melongena* L., in order to avoid varieties of former species of *Cyphomandra* needing different denominations to varieties of *Solanum melongena* L. (see document TWF/40/17 “Report”, paragraph 56).

14. The CAJ, at its sixtieth session, held in Geneva on October 19 and 20, 2009, noted the developments concerning the botanical reclassification of *Lycopersicon*, including *Lycopersicon esculentum* Mill. (Tomato), and *Cyphomandra* and the implications concerning denomination classes, which would be considered by the TC at its forty-sixth session, as set out in paragraphs 21 to 28 of document CAJ/60/4 (see document CAJ/60/10 “Report on the Conclusions”, paragraph 28).

15. The TC, at its forty-sixth session, held in Geneva from March 22 to 24, 2010, noted that there might be advantages in retaining Tomato rootstock species in the same variety denomination class as Tomato, but agreed that the TWV should be invited to consider that matter. Therefore, the TC agreed to request the TWV, at its forty-fourth session, to be held in Veliko Tarnovo, Bulgaria, from July 5 to 9, 2010, to consider the following two alternatives for an amendment to document UPOV/INF/12/2 Annex I, Part I “Classes within a genus”, Class 4:

Alternative 1

	<u>Botanical names</u>	<u>UPOV codes</u>
Class 4.1	<i>Solanum tuberosum</i> L.	SOLAN_TUB
Class 4.2	<i>Solanum lycopersicum</i> var. <i>lycopersicum</i>	SOLAN_LYC_LYC
Class 4.3	<i>Solanum melongena</i> L.	SOLAN_MEL
Class 4.4	<i>Solanum</i> other than classes 4.1, 4.2 and 4.3	other than classes 4.1, 4.2 and 4.3

Alternative 2

	<u>Botanical names</u>	<u>UPOV codes</u>
Class 4.1	<i>Solanum tuberosum</i> L.	SOLAN_TUB
Class 4.2	<i>Solanum melongena</i> L.	SOLAN_MEL
Class 4.3	<i>Solanum</i> other than classes 4.1 and 4.2	other than classes 4.1 and 4.2

16. The TC agreed to invite the CAJ at its sixty-first session to consider those alternatives and, if appropriate, agree that the alternative endorsed by the TWV be put forward as a revision of document UPOV/INF/12/2 for adoption by the Council at its forty-fourth ordinary session, to be held in Geneva on October 21, 2010.

17. The TC further agreed to amend the UPOV codes for the following taxa, simultaneously with any revision of the “Explanatory Notes on Variety Denominations under the UPOV Convention”, document UPOV/INF/12/2 (see document TC/46/15 “Report on the conclusions”, paragraphs 54 to 56):

<u>GENIE database</u>	<u>Current UPOV code</u>	<u>GRIN database</u>
<u>Lycopersicon</u>		
<i>Lycopersicon esculentum</i> Mill.	LYCOP_ESC	<i>Solanum lycopersicum</i> var. <i>lycopersicum</i>
<i>Lycopersicon esculentum</i> Mill. var. <i>esculentum</i>	LYCOP_ESC_ESC	
<i>Lycopersicon esculentum</i> Mill. var. <i>cerasiforme</i> (Dunal) A. Gray	LYCOP_ESC_CER	<i>Solanum lycopersicum</i> var. <i>cerasiforme</i> (Alef.) Fosberg
<i>Lycopersicon hirsutum</i> Dunal	LYCOP_HIR	<i>Solanum habrochaites</i> S. Knapp & D. M. Spooner
<i>Lycopersicon lycopersicum</i> (L.) Karst. ex. Farw. x <i>Lycopersicon hirsutum</i> L.	LYCOP_EHI	no hybrid binomial
<u>Cyphomandra</u>		
Cyphomandra	CYPHO	all species removed
<i>Cyphomandra betacea</i> (Cav.) Sendtn. (synonym <i>Solanum betaceum</i> Cav.)	CYPHO_BET	<i>Solanum betaceum</i> Cav.
<u>Hybrid genus</u>		
<i>Lycopersicon</i> x <i>Cyphomandra</i>	LYCYP	<i>Solanum</i> L.
<i>Lycopersicon lycopersicum</i> x <i>Cyphomandra betacea</i>	LYCYP_EBE	to be investigated

18. The CAJ, at its sixty-first session, held in Geneva on March 25, 2010, proposed the adoption of document UPOV/INF/12/2 Annex I, Part I “Classes within a genus”, Class 4, amended in accordance with the proposals of the TC above. The CAJ took note that the TC

had agreed to the amendment of the UPOV codes for the relevant taxa, simultaneously with any revision of the “Explanatory Notes on Variety Denominations under the UPOV Convention”, document UPOV/INF/12/2, in accordance with the TC proposals, contained in paragraph 25 of document CAJ/61/10 (see document CAJ/61/11 “Report on the Conclusions”, paragraphs 39 and 40).

DOCUMENT UPOV/INF/12, ANNEX I, PART II “CLASSES ENCOMPASSING MORE THAN ONE GENUS”: NEW CLASS FOR *VERBENA* AND *GLANDULARIA*

19. The TWO, at its forty-second session, received a report from an expert from the European Union on problems concerning the classification of hybrids between species of *Verbena* L. and *Glandularia* J. F. Gmel.. Such hybrids were variously entered in the UPOV-ROM Plant Variety Database (UPOV-ROM) as *Verbena* L. (UPOV code: VERBE), *Glandularia* J. F. Gmel. (UPOV code: GLAND) or *Glandularia* ×*hybrida* (GLAND_HYB). GRIN indicates that *Glandularia* J. F. Gmel. is sometimes included in *Verbena* L. (see <http://www.ars-grin.gov/cgi-bin/npgs/html/genus.pl?14656>). Given that *Verbena* L. and *Glandularia* J. F. Gmel. follow the general rule (“one genus / one class”) (see document UPOV/INF/12/1, Annex I), whereby a genus is considered to be a denomination class, that means that the same hybrids can be placed in the different denomination classes by different authorities.

20. The TWO agreed to propose the creation of a new variety denomination class (Class 212) for *Verbena* L. and *Glandularia* J. F. Gmel. in document UPOV/INF/12 “Explanatory Notes on Variety Denominations under the UPOV Convention”, Annex I, Part II “Classes encompassing more than one genus”.

21. The TC, at its forty-sixth session, agreed to propose to amend document UPOV/INF/12/2 Annex I, Part II “Classes encompassing more than one genus” in order to include a new class (Class 212) for *Verbena* L. and *Glandularia* J. F. Gmel..

22. The TC further agreed, subject to approval by the CAJ and the TWPs at their sessions in 2010, to propose to the Council to amend document UPOV/INF/12/2 Annex I, Part II “Classes encompassing more than one genus” accordingly (see document TC/46/15 “Report on the conclusions”, paragraphs 57 and 58).

23. The CAJ, at its sixty-first session, noted, as set out above that the TC had agreed to propose to amend document UPOV/INF/12/2 Annex I, Part II “Classes encompassing more than one genus” in order to include a new class (Class 212) for *Verbena* L. and *Glandularia* J. F. Gmel.. The CAJ agreed that document UPOV/INF/12/2 Annex I, Part II, amended to include a new class (Class 212) for *Verbena* L. and *Glandularia* J. F. Gmel., be put forward for adoption by the Council at its forty-fourth ordinary session, to be held in Geneva on October 21, 2010 (see document CAJ/61/11 “Report on the Conclusions”, paragraphs 41 and 42).

[Annex follows]

ANNEX

**EXPLANATORY NOTES ON VARIETY DENOMINATIONS
UNDER THE UPOV CONVENTION
(Annex I of document UPOV/INF/12/2 (Extract))**

UPOV Variety Denomination Classes:
A Variety Denomination Should not be Used More than Once in the Same Class

For the purposes of providing guidance on the third and fourth sentences of paragraph 2 of Article 20 of the 1991 Act and of Article 13 of the 1978 Act and the 1961 Convention, variety denomination classes have been developed. A variety denomination should not be used more than once in the same class. The classes have been developed such that the botanical taxa within the same class are considered to be closely related and/or liable to mislead or to cause confusion concerning the identity of the variety.

The variety denomination classes are as follows:

- (a) General Rule (one genus / one class): for genera and species not covered by the List of Classes in this Annex, a genus is considered to be a class;
- (b) Exceptions to the General Rule (list of classes):
 - (i) classes within a genus: List of classes in this Annex: Part I;
 - (ii) classes encompassing more than one genus: List of classes in this Annex: Part II.

LIST OF CLASSES

Part I
Classes within a genus

	<u>Botanical names</u>	<u>UPOV codes</u>
Class 1.1	Brassica oleracea	BRASS_OLE
Class 1.2	Brassica other than Brassica oleracea	other than BRASS_OLE
Class 2.1	Beta vulgaris L. var. alba DC., Beta vulgaris L. var. altissima	BETAA_VUL_GVA; BETAA_VUL_GVS
Class 2.2	Beta vulgaris ssp. vulgaris var. conditiva Alef. (syn.: B. vulgaris L. var. rubra L.), B. vulgaris L. var. cicla L., B. vulgaris L. ssp. vulgaris var. vulgaris	BETAA_VUL_GVC; BETAA_VUL_GVF
Class 2.3	Beta other than classes 2.1 and 2.2.	other than classes 2.1 and 2.2
Class 3.1	Cucumis sativus	CUCUM_SAT
Class 3.2	Cucumis melo	CUCUM_MEL
Class 3.3	Cucumis other than classes 3.1 and 3.2	other than classes 3.1 and 3.2
Class 4.1	Solanum tuberosum L.	SOLAN_TUB
Class 4.2	Solanum other than class 4.1	other than class 4.1

EXPLANATORY NOTES ON VARIETY DENOMINATIONS
UNDER THE UPOV CONVENTION
(Annex I of document UPOV/INF/12/2 (Extract))

UPOV Variety Denomination Classes:
A Variety Denomination Should not be Used More than Once in the Same Class

LIST OF CLASSES (Continuation)
Part II
Classes encompassing more than one genus

	<u>Botanical names</u>	<u>UPOV codes</u>
Class 201	Secale, Triticale, Triticum	SECAL; TRITL; TRITI
Class 202	Megathyrsus, Panicum, Setaria, Steinchisma	MEGAT; PANIC; SETAR; STEIN
Class 203*	Agrostis, Dactylis, Festuca, Festulolium, Lolium, Phalaris, Phleum and Poa	AGROS; DCTLS; FESTU; FESTL; LOLIU; PHALR; PHLEU; POAAA
Class 204*	Lotus, Medicago, Ornithopus, Onobrychis, Trifolium	LOTUS; MEDIC; ORNTP; ONOBR; TRFOL
Class 205	Cichorium, Lactuca	CICHO; LACTU
Class 206	Petunia and Calibrachoa	PETUN; CALIB
Class 207	Chrysanthemum and Ajanía	CHRY S; AJANI
Class 208	(Statice) Goniolimon, Limonium, Psylliostachys	GONIO; LIMON; PSYLL
Class 209	(Waxflower) Chamelaucium, Verticordia	CHMLC; VERTI; VECHM
Class 210	Jamesbrittania and Sutera	JAMES; SUTER
Class 211	(Mushrooms) Agaricus Agrocybe Auricularia Dictyophora Flammulina Ganoderma Grifola Hericiu m Hypsizigus Lentinula Lepista Lyophyllum Meripilus Mycoleptodonoides Naematoloma Panellus Pholiota Pleurotus Polyporus Sparassis Tricholoma	AGARI AGROC AURIC DICTP FLAMM GANOD GRIFO HERIC HYP SI LENTI LEPIS LYOPH MERIP MYCOL NAEMA PANEL PHLIO PLEUR POLYO SPARA MACRO

[End of Annex and of document]

* Classes 203 and 204 are not solely established on the basis of closely related species.