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GENEVA

TECHNICAL WORKING PARTY FOR ORNAMENTAL PLANTS AND FOREST TREES

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VARIETY DENOMINATIONS

Document prepared by the Office of the Union

1. The purpose of this document is to report on certain matters concerning variety denomination Class 211 "Edible Mushrooms" and Class 202 "Panicum, Setaria" in the "Explanatory Notes on Variety Denominations under the UPOV Convention" (see document UPOV/INF/12/1, Annex I, Part II "Classes encompassing more than one genus"), as considered by the Technical Committee (TC) at its forty-fifth session, held in Geneva from March 30 to April 1, 2009. In the case of the proposal of the TC concerning Class 202, the TC requested that the Technical Working Party for Agricultural Crops (TWA) consider that proposal at its thirty-eighth session, to be held in Seoul, Republic of Korea, from August 31 to September 4, 2009.

2. Subsequent to the forty-fifth session of the TC, the Office of the Union became aware of a change in the botanical classification of Tomato, that will require consideration with regard to document UPOV/INF/12/1, Annex I, Part I "Classes within a genus". That development is also reported in this document.

Class 211 "Edible Mushrooms"

Background information

3. The "Explanatory Notes on Variety Denominations under the UPOV Convention", document UPOV/INF/12/1, Annex I, Part II "Classes encompassing more than one genus",

establishes Class 211 "Edible Mushrooms" (see Annex to this document). Currently, the consequence of Class 211 is not fully clear with regard to species of *Agaricus*, *Agrocybe*, *Auricularia*, *Dictyophora*, *Flammulina*, *Ganoderma*, *Grifola*, *Hericium*, *Hypsizigus*, *Lentinula*, *Lepista*, *Lyophyllum*, *Meripilus*, *Mycoleptodonoides*, *Naematoloma*, *Panellus*, *Pholiota*, *Pleurotus*, *Polyporus*, *Sparassis* and *Tricholoma*, which are not specified in Class 211. For example, there is an entry in the UPOV-ROM Plant Variety Database (UPOV-ROM) for the species *Pleurotus florida*, which is not included in the list of species in Class 211.

4. At its forty-second session, held in Cracow, Poland, from June 23 to 27, 2008, the TWV considered document TWV/42/5 and, in particular, the request made by the TC at its forty-fourth session to clarify the situation with regard to the Class 211 "Edible Mushrooms" in the "Explanatory Notes on Variety Denominations under the UPOV Convention", document UPOV/INF/12/1, Annex I, Part II "Classes encompassing more than one genus" (see Annex to this document).

5. The TWV agreed 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*, in line with all other classes containing more than one genus.

6. The TWV noted that Class 211 would not necessarily contain all edible mushrooms and may also cover some species for which there were no edible varieties. Therefore, it agreed that it would be appropriate to change the name of Class 211 to "Class 211 (Mushrooms)", rather than "Edible Mushrooms".

Conclusions of the Technical Committee

7. At its forty-fifth session, the TC proposed that Class 211 in document UPOV/INF/12/1, Part II "Classes encompassing more than one genus" 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*. The TC further agreed that the name of Class 211 should be changed to "Class 211 (Mushrooms)".

8. The TC noted that its proposal concerning Class 211 would be reported to the Administrative and Legal Committee (CAJ), for consideration at its sixtieth session, to be held in Geneva on October 19 and 20, 2009. The TC noted that, if the CAJ was in accordance with the proposal of the TC, a draft revised version of the "Explanatory Notes on Variety Denominations under the UPOV Convention", document UPOV/INF/12/1, would be presented to the Council for adoption at its forty-third ordinary session, to be held in Geneva on October 22, 2009.

Class 202 "Panicum, Setaria"

Background information

9. The attention of the Office of the Union was brought to the fact that the UPOV code for *Panicum maximum* Jacq. (UPOV code: PANIC_MAX) is not consistent with the

classification in GRIN[1], which indicates that *Panicum maximum* Jacq. is now considered to be a synonym of *Megathyrsus maximus* (Jacq.) B. K. Simon & S. W. L. Jacobs (see *http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?447623*). Further investigation of all the *Panicum* species in the GENIE database further revealed that *Panicum laxum* Sw. (UPOV code: PANIC_LAX) is now considered to be a synonym of *Steinchisma laxa* (Sw.) Zuloaga.

10. In relation to such cases, the "Guide to the UPOV Code System" explains the following:

> "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 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."

11. *Panicum* L. is covered by the Class 202 "Panicum, Setaria" in the List of Classes in Annex I to document UPOV/INF/12/1, Part II "Classes encompassing more than one genus". Therefore, any amendment to the classification of species in *Panicum* L. may require a revision of Class 202 "Panicum, Setaria". A further consideration in this matter is that the botanical name *Panicum maximum* Jacq. has been in use by some members of the Union for a considerable time. On that basis, further information was sought from GRIN on the background to the reclassification. Dr. John Wiersema (GRIN) explained as follows:

> "It appears that the dismantling of *Panicum*, responsible for the acceptance of both *Megathyrsus* and *Steinchisma* and a number of other segregate genera, will survive. It is based on molecular evidence indicating that many species formerly placed in *Panicum* do not group with core *Panicum*. In order to preserve *Panicum* in the former sense, some other commonly recognized genera would need to be incorporated. The alternative, limiting *Panicum* to the core group of species, seems to be the preferred

[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*

course among New World and Australian agrostologists, who are removing many of the anomalous taxa to other genera.

"Of course, grass systematics can be quite complex, with lots of reticulate evolution involved in some groups, probably also in the *Paniceae* tribe, so the full story of their relationships may not yet be known. *Panicum maximum* is such a widespread species that it will take some time before its treatment in *Megathyrsus* catches on everywhere."

12. Dr. Wiersema clarified that the explanation above is based on published evidence provided by others. He has subsequently investigated the most recent literature relating to *Megathyrsus* and notes that:

"There has been some indication that *M. maximus* could be aligned with the genus *Urochloa*, where it has been placed by some, although this seems not to be the view reflected in its current classification in *Megathyrsus*. Based on the molecular evidence I have seen, there seems far less chance of its being returned to *Panicum*, in any case."

Revision of UPOV codes

13. On the basis of the explanation by Dr. Wiersema, it is proposed that, for UPOV purposes, there be a reclassification of *Panicum maximum* Jacq. to *Megathyrsus maximus* (Jacq.) B. K. Simon & S. W. L. Jacobs and *Panicum laxum* Sw. to *Steinchisma laxa* (Sw.) Zuloaga. That reclassification would need to be reflected in the corresponding UPOV codes and would also require reconsideration of Class 202.

14. On the basis that there might be a revision of Class 202 "Panicum, Setaria", it was considered appropriate to check for consistency between the GENIE database / UPOV code and the GRIN database concerning the classification of species of *Setaria* P. Beauv. In that regard, the following inconsistencies were found:

GENIE database	UPOV code	GRIN database
Setaria flavida (Retz.) Veldkamp (synonym: *Paspalidium flavidum* (Retz.) A. Camus)	SETAR_FLA	*Paspalidium flavidum* (Retz.) A. Camus (synonym: *Setaria flavida* (Retz.) Veldkamp)
Setaria viridis (L.) P. Beauv.	SETAR_VIR	*Setaria italica* subsp. *viridis* (L.) Thell. (synonym: *Setaria viridis* (L.) P. Beauv.)

15. On the basis that there are no specific data in the UPOV-ROM, nor in the GENIE database, for *Setaria flavida* (Retz.) Veldkamp / *Paspalidium flavidum* (Retz.) A. Camus, nor for *Setaria viridis* (L.) P. Beauv. / *Setaria italica* subsp. *viridis* (L.) Thell., it is proposed that those entries in the GENIE database and corresponding UPOV codes be deleted.

Revision of Class 202

16. With regard to a possible revision of Class 202, the following information extracted from the UPOV-ROM Plant Variety Database (UPOV-ROM) was prepared for consideration by the TC:

Genus / species	Entries in UPOV-ROM: Version 2008/05	
	Number	Contributors
Panicum L.	3	NL, QM*
Panicum antidotale Retz.	1	ZA
Panicum coloratum L.	9	AR, JP, QM, US
Panicum miliaceum L. (Common millet)	150	AR, AT, BG, CZ, DE, GB, HU, LT, PL, QM, RU, SI, SK, UA
Panicum virgatum L.	5	QM
Panicum maximum Jacq. (White Buffalo Grass)	38	AR, AU, BR, JP, QM, ZA
Panicum laxum Sw.	1	AU
Megathyrsus	-	-
Steinchisma	-	-
Setaria P. Beauv.	1	QZ
Setaria italica (L.) P. Beauv. (Foxtail Bristle Grass; Italian Millet)	52	AR, AT, CZ, HU, IL, JP, QM, QZ, RU, SK, UA
Setaria palmifolia (Koen.) Stapf	1	IL
Setaria sphacelata (Schumach.) Stapf & C. E. Hubb.	7	AU, QM, ZA

(*QM: Organisation for Economic Co-operation and Development (OECD))

Conclusions of the Technical Committee

17. The TC agreed to the deletion of the entries in the GENIE database for *Setaria flavida* (Retz.) Veldkamp / *Paspalidium flavidum* (Retz.) A. Camus and for *Setaria viridis* (L.) P. Beauv. / *Setaria italica subsp. viridis* (L.) Thell..

18. The TC agreed to propose that Class 202 in document UPOV/INF/12/1, Part II "Classes encompassing more than one genus", be extended to cover *Megathyrsus, Panicum, Setaria and Steinchisma*.

19. The TC requested the Technical Working Party for Agricultural Crops (TWA) to consider that proposal at the thirty-eighth session of the TWA, to be held in Seoul, Republic of Korea, from August 31 to September 4, 2009. It agreed that, subject to endorsement of the TC proposal by the TWA, the CAJ would be invited to consider that proposal at its sixtieth session, to be held in Geneva on October 19 and 20, 2009, in conjunction with the proposed revision of document UPOV/INF/12/1 "Explanatory notes on variety denominations under the UPOV Convention" (see paragraph 8, above).

Tomato / Class 4.2

20. Until 2008, the recognized botanical name for "Tomato" in the GRIN database was "*Lycopersicon esculentum* Mill.". On that basis, and in accordance with the "Guide to the UPOV Code System" (see paragraph 10 above), 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/12/1, paragraph 2, Section 2.5.2).

21. 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*".

22. In accordance with the "Guide to the UPOV Code System" (see paragraph 4 above), 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). However, such a reclassification would also need to be considered in relation to the variety denomination class. In particular, without a revision of document UPOV/INF/12/1, the denomination class for tomato would change from the genus class "Lycopersicon" ("one genus / one class") to Class 4.2 "*Solanum* other than class 4.1 (*Solanum tuberosum* L.).

23. 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:

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

24. 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.

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

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

26. 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).

27. This matter will be reported to the CAJ for consideration at its sixtieth session, to be held in Geneva on October 19 and 20, 2009 and to the TC for consideration at its forty-sixth session, to be held in Geneva in March 2010. With regard to the timetable for addressing this matter, the CAJ will be invited to note that the TC, at its forty-sixth session, may decide to refer the matter to the Technical Working Party for Vegetables (TWV) for consideration at its forty-fourth session, to be held in 2010. The TC would then be in a position to make a proposal at its forty-seventh session, to be held in March/April 2011.

Revision of document UPOV/INF/12/1 "Explanatory notes on variety denominations under the UPOV Convention"

28. At its forty-sixth session, the TC noted that its proposals concerning Class 202 and Class 211 would be reported for consideration by the CAJ at its sixtieth session. The TC noted that, if the CAJ was in accordance with the proposals of the TC, subject to endorsement of the TC proposal concerning Class 202 by the TWA at its thirty-eighth session, a draft revised version of the "Explanatory Notes on Variety Denominations under the UPOV Convention", document UPOV/INF/12/1, would be presented to the Council for adoption at its forty-third ordinary session, to be held in Geneva on October 22, 2009.

29. At the time of noting the timetable above, the TC was unaware of the developments concerning the botanical reclassification of *Lycopersicon*, including *Lycopersicon esculentum* Mill. (Tomato), and *Cyphomandra*. In considering whether to propose to the Council the revision of document UPOV/INF/12/1, for adoption at the forty-third ordinary session of the Council, to be held in Geneva on October 22, 2009, the CAJ may consider the possibility of a delay in order to accommodate any further revisions that might result from the botanical reclassification of *Lycopersicon* and *Cyphomandra*. However, in that respect, the CAJ may also consider the timetable for consideration by the TC (see paragraph 27) and the possibility that a revision of document UPOV/INF/12/1 might not be required to address the developments concerning the botanical reclassification of *Lycopersicon* and *Cyphomandra* (see paragraph 22).

[Annex follows]

ANNEX

EXPLANATORY NOTES ON VARIETY DENOMINATIONS
UNDER THE UPOV CONVENTION
(Annex I of document UPOV/INF/12/1 (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

	Botanical names	UPOV codes
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

LIST OF CLASSES (Continuation)

Part II

Classes encompassing more than one genus

	Botanical names	UPOV codes
Class 201	Secale, Triticale, Triticum	SECAL; TRITL; TRITI
Class 202	Panicum, Setaria	PANIC; SETAR
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 Ajania	CHRYS; 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	Edible Mushrooms	
	Agaricus bisporus	AGARI_BIS
	Agaricus blazei	AGARI_BLA
	Agrocybe cylindracea	AGROC_CYL
	Auricularia auricura	AURIC_AUR
	Auricularia polytricha (Mont.) Sscc.	AURIC_POL
	Dictyophora indusiata (Ventenat:Persoon) Fischer	DICTP_IND
	Flammulina velutipes	FLAMM_VEL
	Ganoderma lucidum (Leyss:Fries) Karsten	GANOD_LUC
	Grifola frondosa	GRIFO_FRO
	Hericium erinaceum	HERIC_ERI
	Hypsizigus marmoreus	HYPSI_MAR
	Hypsizigus ulmarius	HYPSI_ULM
	Lentinula edodes	LENTI_ELO
	Lepista nuda (Bulliard:Fries) Cooke	LEPIS_NUD
	Lepista sordida (Schumacher:Fries) Singer	LEPIS_SOR
	Lyophyllum decastes	LYOPH_DEC
	Lyophyllum shimeji (Kawamura) Hongo	LYOPH_SHI
	Meripilus giganteus (Persoon:Fries) Karten	MERIP_GIG
	Mycoleptodonoides aitchisonii (Berkeley) Maas Geesteranus	MYCOL_AIT
	Naematoloma sublateritium	NAEMA_SUB
	Panellus serotinus	PANEL_SER
	Pholiota adiposa	PHLIO_ADI
	Pholiota nameko	PHLIO_NAM
	Pleurotus cornucopiae var.citrinooileatus	PLEUR_COR
	Pleurotus cystidiosus	PLEUR_CYS
	Pleurotus cystidiosus subsp. Abalonus	PLEUR_CYS_ABA
	Pleurotus eryngii	PLEUR_ERY
	Pleurotus ostreatus	PLEUR_OST
	Pleurotus pulmonarius	PLEUR_PUL
	Polyporus tuberaster (Jacquin ex Persoon) Fries	POLYO_TUB
	Sparassis crispa (Wulfen) Fries	SPARA_CRI
	Tricholoma giganteum Massee	MACRO_GIG

[End of Annex and of document]

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