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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

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 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.

Class 211 "Edible Mushrooms"

2. 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.

3. 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 document TWV/42/5 and to this document).

4. 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.

5. 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".

6. 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)".

7. 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

8. The attention of the Office of the Union has been 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.

[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*

(UPOV code: PANIC_LAX) is now considered to be a synonym of *Steinchisma laxa* (Sw.) Zuloaga.

9. 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."

10. As noted above (see paragraph 1), *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 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."

11. 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

12. 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.

13. 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.)

14. 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

15. 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))

16. At its forty-fifth session the TC considered the following possibilities for a revision of Class 202:

(a) *Delete Class 202*

Megathyrsus, *Panicum*, *Setaria* and *Steinchisma* would then follow the General Rule (one genus / one class).

(b) *No change to Class 202 "Panicum, Setaria"*

Following the reclassification of *Panicum*, if no change is made to Class 202, *Megathyrsus* would follow the General Rule (one genus / one class) and *Megathyrsus maximus* (*Panicum maximum*) would fall within the class for genus "Megathyrsus". Similarly, *Steinchisma* would follow the General Rule (one genus / one class) and *Steinchisma laxa* (*Panicum laxum*) would fall within the class for genus "Steinchisma".

(c) *Class 202 to be extended to cover Megathyrsus, Panicum, Setaria and Steinchisma*

Panicum maximum / *Megathyrsus maximus* and *Panicum laxum* / *Steinchisma laxa* would continue to fall within Class 202.

17. In the case of (a) and (b), there is a potential risk that, according to the botanical name used, different contributors to the UPOV-ROM might place *Panicum maximum* Jacq. /

Megathyrsus maximus (Jacq.) B. K. Simon & S. W. L. Jacobs in a different denomination class. However, that is a general risk which is avoided if members of the Union use the UPOV code as the basis for deciding the variety denomination class.

Conclusions of the Technical Committee

18. 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..

19. 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*.

20. 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".

[Annex follows]

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 II

Classes encompassing more than one genus

	Botanical names	UPOV codes
Class 202	Panicum, Setaria	PANIC; SETAR
[…]		
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]