



TC/45/8 Add.

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TECHNICAL COMMITTEE

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ADDENDUM TO “VARIETY DENOMINATIONS”

Document prepared by the Office of the Union

1. The purpose of this document is to consider a possible revision of variety denomination Class 202 “Panicum, Setaria” in document UPOV/INF/12/1 “Explanatory notes on variety denominations under the UPOV Convention”, in conjunction with the proposed revision of document UPOV/INF/12/1 set out in document TC/45/8.

Background

2. 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 GRIN¹, 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.

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

3. 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.”

4. 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 *Panicaceae* 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.”

5. 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.”

6. 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.

7. 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:

<u>GENIE database</u>	<u>UPOV code</u>	<u>GRIN database</u>
<i>Setaria flavidia</i> (Retz.) Veldkamp (synonym: <i>Paspalidium flavidum</i> (Retz.) A. Camus)	SETAR_FLA	<i>Paspalidium flavidum</i> (Retz.) A. Camus (synonym: <i>Setaria flavidia</i> (Retz.) Veldkamp)
<i>Setaria viridis</i> (L.) P. Beauv.	SETAR_VIR	<i>Setaria italica</i> subsp. <i>viridis</i> (L.) Thell. (synonym: <i>Setaria viridis</i> (L.) P. Beauv.)

8. On the basis that there are no specific data in the UPOV-ROM, nor in the GENIE database, for *Setaria flavidia* (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.

9. With regard to a possible revision of Class 202, the following information extracted from the UPOV-ROM Plant Variety Database (UPOV-ROM) might be considered relevant:

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

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

Revision of Class 202

10. There are various possibilities for a revision of Class 202, three of which are as follows:

(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.

11. 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.

12. In order to ensure that all interested parties have an adequate opportunity to consider the situation with regard to Class 202, the Technical Committee may wish to make an initial proposal on this matter at its forty-fifth session and invite 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. If the TWA endorse the proposal of the TC, the Administrative and Legal Committee (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”, as set out in document TC/45/8.

13. *The TC is invited to:*

(a) *consider 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., as set out in paragraph 8; and*

(b) *consider whether to propose a revision to Class 202 in document UPOV/INF/12/1, Part II “Classes encompassing more than one genus”, on the basis of paragraphs 10 to 12.*

[End of document]