



TWV/40/9

ORIGINAL: English

DATE: May 2, 2006

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR VEGETABLES

Fortieth Session

Guanajuato, Guanajuato State, Mexico, June 12 to 16, 2006

TEST GUIDELINES FOR MAIZE

prepared by the Office of the Union

1. The Technical Working Party for Vegetables (TWV), at its thirty-eighth session held in Seoul, June 7 to 11, 2004, considered document TWV/38/6-TWA/33/6 "Working Paper on Test Guidelines for Sweetcorn".
2. The TWV examined document TWV/38/6-TWA/33/6 and document TG/2/6 + Corr. and observed that:
 - Sweet Corn and Maize both belong to the same species and the present Test Guidelines for Maize (document TG/2/6 + Corr.) clearly applied to all varieties of *Zea mays* L., with the exception of ornamental varieties;
 - the vast majority of characteristics used in TWV/38/6-TWA/33/6 were applicable to both sweetcorn and maize;
 - document TG/2/6 Corr. contained characteristics which indicated that that document had also been designed to be applied to sweetcorn varieties (e.g. characteristic 30: type of grain with the state of expression "sweet").
3. The TWV, on the basis of the observations above, agreed to recommend that separate Test Guidelines for Sweetcorn should not be prepared and that the current Test Guidelines for Maize should be amended to better address sweetcorn varieties. The TWV also made the following comments:

- it should be the responsibility of the TWA to consider which characteristics in document TG/2/6 + Corr. should be deleted.
- until now, TG/2/6 has not been used for the testing of sweetcorn varieties, but separate national guidelines for sweetcorn had been used; thus there was little experience with respect to the applicability of the current Test Guidelines for Maize to sweetcorn varieties;
- notwithstanding the above, some characteristics specific to sweetcorn varieties would not be adequately covered using the present Test Guidelines for Maize; a minimum number of additional characteristics would need to be added;
- it would be possible to distinguish “sweetcorn” varieties and varieties other than sweetcorn varieties using characteristics such as “sugar content” and “shrinking at dry stage”; thus it would be possible to introduce characteristics peculiar to sweetcorn varieties, some of which would be introduced as characteristics for sweetcorn varieties only;
- conversely, characteristics contained in the current Test Guidelines for Maize, not applicable to sweetcorn varieties, could be indicated as “for maize only”
- the following characteristics of document TWV/38/6-TWA/33/6 are specific to sweetcorn varieties and should be added to the current Test Guidelines for Maize.:

(3a) Leaf: intensity of green color

(25) Plant: number of tillers

(26) Tiller: length

(40) Cob: diameter

(41) Corn: number of colors

(50) Corn: sugar content

4. The Technical Working Party for Agricultural Crops (TWA) agreed, at its thirty-third session held in Poznań, Poland, from June 28 to July 2, 2004, that the Test Guidelines for Maize should be revised and should incorporate the necessary changes to accommodate the DUS testing of sweetcorn varieties. The TWA and the Chairman of the TWV agreed that the TWA should be the leading Technical Working Party for that revision and further agreed that the joint leading experts should be from France and Hungary.

5. The TWV, at its thirty-ninth session held in Nitra, Slovakia, from June 6 to 10, 2005, informed that the TWA, at its thirty-fourth session in November 2005, to be held in Christchurch, New Zealand, would consider the Test Guidelines for Maize on the basis of recommendations to be submitted by experts from France and Hungary.

6. The TWV considered the possible inclusion of additional characteristics in document TG/2/6, on the basis of a proposal made by the expert from Hungary. The TWV agreed to further consideration, at the national level, of the inclusion of the following characteristics and to the checking of the proposed example varieties:

Characteristics (Stage/type of observation)	States of expression	Example varieties	Note
Leaf: intensity of green color (51/QN)	Weak Medium Strong	Jubilee Royalty Merkur	3 5 7
<u>Sweetcorn varieties only:</u> Tiller: length (75/QN)	Short Medium Long	Centurion Jubilee Dorado	3 5 7
<u>Sweetcorn varieties only:</u> Ear: shape of tip (75/PQ)	Pointed pointed to blunt Blunt	Jubilee Boston Champ	1 2 3
<u>(*)Sweetcorn varieties only:</u> Corn: number of colors (75/QL)	One Two	Jubilee Goldenpear	1 2
<u>(*)Sweetcorn varieties only:</u> Corn: intensity of color (75/QN)	Light Medium Dark	Jaguar HMX 5371 Jubilee	3 5 7
<u>Sweetcorn varieties only:</u> Ear: diameter (75/QN)	Small Medium Large	Zenith Jubilee Royalty	3 5 7
<u>(*)(+)Sweetcorn varieties only:</u> Ear: diameter of ear in relation to diameter of core (75/QN)	Small Medium Large	Gyöngymazsola Boston Empire	3 5 7
<u>Sweetcorn varieties only:</u> Corn: total sugar content (75/QN)	very low Low Medium High very high	El Toro Royalty Monarchy Dessert 73 Dynasty	1 3 5 7 9
<u>Sweetcorn varieties only:</u> Time of maturity (75/QN)	very early Early Medium Late very late	Korai arany Boston Jubilee Bonus	1 3 5 7 9
<u>(+)Popcorn varieties only:</u> Shape of popped grain (93/QL)	Butterfly Intermediate Globular	Poppy Robust 90252	1 2 3

7. During the thirty-fourth session of the TWA, the subgroup for Maize discussed document TWA/34/11, presented by Mr. Ferenc Kovács (Hungary), and agreed the following:

New reference	Titles of the characteristic used in document TWA/34/11	Changes agreed and comments
New Char. 1	Foliage: intensity of green color	to be indicated as VG; state 3 = light, state 7 = dark; Characteristic useful for all varieties
New Char. 2	<u>Sweetcorn varieties only</u> : Tiller: length	to be indicated as VG; Concerns were expressed about its inclusion because of environmental dependence. The expert from Hungary to provide more information about reproducibility, range of variation, effect for additional distinction.
New Char. 3	<u>Sweetcorn varieties only</u> : Ear: shape of tip	to be indicated as VG; Concerns were expressed about its inclusion because of environmental dependence. The expert from Hungary to provide more information about reproducibility, range of variation, effect for additional distinction. To check if “tip” should be replaced by “apex”
New Char. 4	<u>Sweetcorn varieties only</u> : Corn: number of colors	(+) to be added with an explanation for the genetic basis; to clarify which colors can be observed. To consider replacing “Corn” by ”Kernel”
New Char. 5	<u>Sweetcorn varieties only</u> : Corn: intensity of color	to read “... intensity of yellow color”; to check whether applicable for all varieties or only for single colored varieties To consider replacing “Corn” by ”Kernel”
New Chars. 6-8	<u>Sweetcorn varieties only</u> : Ear: diameter <u>Sweetcorn varieties only</u> : Ear: diameter of ear in relation to diameter of core Corn: size	to check whether the most appropriate characteristic is length, width, shape
New Char. 9	<u>Sweetcorn varieties only</u> : Corn: total sugar content	(+) to be added with an explanation of the method and a definition of the harvest time. To check the number of notes.
New Char. 10	<u>Sweetcorn varieties only</u> : Time of maturity	To be moved before New Char. 2. (+) to be added with method to be provided
New Char. 11	<u>Popcorn varieties only</u> : Shape of popped grain	to read “...: Type of popped grain”, to check wording for note 2.

8. The TWA agreed to revise the characteristics proposed for Sweetcorn, as set out in document TWA/34/11, and to integrate them in the Test Guidelines for Maize. It was agreed

that there was a need for a full revision of TG/2/6 covering the table of characteristics and the description of protein characteristics in the Annex. The TWA was informed that a ringtest for protein characteristics had been performed by experts from France, Spain and Germany in 2005. The ringtest would be continued to clarify some open questions during November 2005. Interested experts were invited to indicate their interest in participating in that laboratory ringtest to the leading expert by the end of 2005.

9. At its forty-second session, the Technical Committee (TC) agreed that the Test Guidelines for Maize should be revised.

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