

# Technical Working Party for Vegetables

Fifty-Ninth Session

Virtual meeting, May 5 to 8, 2025

TWV/59/5-TWA/54/5

**Original:** English

**Date:** March 28, 2025

# Technical Working Party for Agricultural Crops

Fifty-Fourth Session

Arusha, United Republic of Tanzania, May 19 to 22, 2025

## PARTIAL REVISION OF THE TEST GUIDELINES FOR MAIZE

*Document prepared by an expert from the Netherlands (Kingdom of)*

*Disclaimer: this document does not represent UPOV policies or guidance*

1. The purpose of this document is to present a proposal for a partial revision of the Test Guidelines for Maize (document TG/2/7 Rev.).
2. The Technical Working Party for Vegetables (TWV), at its fifty-eighth session<sup>1</sup>, and The Technical Working Party for Agricultural Crops (TWA), at its fifty-third session<sup>2</sup>, considered a proposal for a partial revision of the Test Guidelines for Maize (*Zea mays* L.) and agreed to continue discussions on the inclusion of a new characteristic at the fifty-ninth session of the TWV and the fifty-fourth session of the TWA (see documents TWV/58/11 "Report", Annex II and TWA/53/9 "Report", paragraph 54).
3. The following changes are proposed:
  - (a) Revision of characteristics 24.1 and 24.2 "Plant: length" (There is a need to separate inbred lines from hybrids varieties for this characteristic. Plants of inbred lines are always clearly shorter than hybrids ones, therefore two different scales are needed).
  - (b) Revision of characteristics 32: "Only varieties with ear type of grain: sweet, pop or waxy: Ear: number of colors of grains" and 38: "Ear: main color of top of grain"
  - (c) Addition of new characteristic and explanation "Ear: secondary color of grain"
  - (d) Changes to the Technical Questionnaire
4. The proposed changes are presented below in highlight and underline (insertion) and ~~striethrough~~ (deletion).

<sup>1</sup> held via electronic means, from April 22 to 25, 2024.

<sup>2</sup> held via electronic means, from May 27 to 30, 2024

Proposed revision of characteristics 24.1 and 24.2 “Plant: length”*Current wording*

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>24.1</b> (*) (+)	<b>MS</b> <b>75-85</b> <u>Only inbred lines and varieties with ear type of grain: sweet or pop: Plant: length</u>	<u>Seulement pour les lignées endogames et les variétés avec type de grain de l'épi: doux ou à éclater: Plante: longueur</u>	<u>Nur Inzuchtlinien und Sorten mit Kolben: Korntyp: Zuckermais oder Popcorn: Pflanze: Länge</u>	<u>Sólo variedades endógamas y variedades con mazorca con tipo de grano: dulce o palomero: Planta: longitud</u>		
<b>QN</b>	very short	très courte	sehr kurz	muy corta	F7	1
	short	courte	kurz	corta	Spirit (SC), W117	3
	medium	moyenne	mittel	media	F244, Puma (SC)	5
	long	longue	lang	larga	Royalty (SC), WD36	7
	very long	très longue	sehr lang	muy larga	Enterprise (SC)	9
<b>24.2</b> (*) (+)	<b>MS</b> <b>75-85</b> <u>Only hybrids and open-pollinated varieties, excluding varieties with ear type of grain: sweet or pop: Plant: length</u>	<u>Seulement pour les hybrides et les variétés à fécondation libre, à l'exclusion des variétés avec type de grain de l'épi: doux ou à éclater: Plante: longueur</u>	<u>Nur Hybriden und freiabblühende Sorten, ohne Sorten mit Kolben: Korntyp: Zuckermais oder Popcorn: Pflanze: Länge</u>	<u>Sólo híbridos y variedades de polinización libre, excepto variedades con mazorca con tipo de grano: dulce o palomero: Planta: longitud</u>		
<b>QN</b>	very short	très courte	sehr kurz	muy corta		1
	short	courte	kurz	corta	PR39D23	3
	medium	moyenne	mittel	media	PR37Y12	5
	long	longue	lang	larga	DKC5166	7
	very long	très longue	sehr lang	muy larga		9

## Proposed new wording

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>24.1</b> <b>(*)</b> <b>(+)</b>	<b>MS</b> <b>75-85</b>	<u>Only inbred lines and varieties with ear type of grain: sweet or pop:</u> Plant: length	<u>Seulement pour les lignées endogames et les variétés avec type de grain de l'épi: doux ou à éclater:</u> Plante: longueur	<u>Nur Inzuchtlinien und Sorten mit Kolben:</u> <u>Korntyp: Zuckermais oder Popcorn:</u> Pflanze: Länge	<u>Sólo variedades endógamas y variedades con mazorca con tipo de grano: dulce o palomero:</u> Planta: longitud	
<b>QN</b>	very short	très courte	sehr kurz	muy corta	F7	1
	short	courte	kurz	corta	<u>Spirit (SC)</u> , W117	3
	medium	moyenne	mittel	media	F244, <u>Puma (SC)</u>	5
	long	longue	lang	larga	<u>Royalty (SC)</u> , WD36	7
	very long	très longue	sehr lang	muy larga	<u>Enterprise (SC)</u>	9
<b>24.2</b> <b>(*)</b> <b>(+)</b>	<b>MS</b> <b>75-85</b>	<u>Only hybrids and open-pollinated varieties, excluding varieties with ear type of grain: sweet or pop:</u> Plant: length	<u>Seulement pour les hybrides et les variétés à fécondation libre, à l'exclusion des variétés avec type de grain de l'épi: doux ou à éclater:</u> Plante: longueur	<u>Nur Hybriden und freiabblühende Sorten, ohne Sorten mit Kolben:</u> <u>Korntyp: Zuckermais oder Popcorn:</u> Pflanze: Länge	<u>Sólo híbridos y variedades de polinización libre, excepto variedades con mazorca con tipo de grano: dulce o palomero:</u> Planta: longitud	
<b>QN</b>	very short	très courte	sehr kurz	muy corta		1
	short	courte	kurz	corta	PR39D23, <u>Spirit (SC)</u>	3
	medium	moyenne	mittel	media	PR37Y12, <u>Puma (SC)</u>	5
	long	longue	lang	larga	DKC5166, <u>Royalty (SC)</u>	7
	very long	très longue	sehr lang	muy larga	<u>Enterprise (SC)</u>	9

Revision of characteristics 32: "Only varieties with ear type of grain: sweet, pop or waxy: Ear: number of colors of grains" and 38: "Ear: main color of top of grain"

*Current wording*

32. (*)	75-79 (S) VG	Only varieties with ear type of grain: sweet or waxy: Ear: number of colors of grains	Seulement pour les variétés avec type de grain de l'épi: doux ou cireux: Épi: nombre de couleurs de grains	Nur Sorten mit Kolben: Korntyp: Zuckermais oder Wachsmals: Kolben: Anzahl Farben der Körner	Sólo variedades con mazorca con tipo de grano: dulce o ceroso: Mazorca: número de colores de los granos		
QL		one	une	eine	uno	Jubilee (SC)	1
	(e)	two	deux	zwei	dos	Eolrukchal-ilho, Serendipity (SC)	2
38. (*)	92-93 (S) VG	Ear: color of top of grain	Épi: couleur du sommet du grain	Kolben: Farbe der Kornkrone	Mazorca: color del extremo superior del grano		
PQ	(d)	white	blanc	weiß	blanco	A188, Pure white (SC), Snowbelle (SC)	1
	(e)	yellowish white	blanc jaunâtre	gelblich weiß	blanco amarillento		2
		yellow	jaune	gelb	amarillo	F259	3
		yellow orange	jaune orangé	gelborange	amarillo anaranjado	F2, Gyöngymazsola (SC)	4
		orange	orange	orange	naranja	F257, GH 2547 (SC)	5
		red orange	rouge orangé	rotorange	naranja rojizo	Dynasty (SC)	6
		red	rouge	rot	rojo		7
		purple	pourpre	purpur	púrpura		8
		brownish	brunâtre	bräunlich	amarronado	Zenith (SC)	9
		blue black	noir-bleu	blauschwarz	negro azulado	Miheukchal	10

*Proposed new wording*

32. (*)	75-79 (S) VG	<u>Only varieties with ear type of grain: sweet, pop or waxy:</u> Ear: number of colors of grains	<u>Seulement pour les variétés avec type de grain de l'épi: doux, à éclater ou cireux:</u> Épi: nombre de couleurs de grains	<u>Nur Sorten mit Kolben: Korntyp: Zuckermais, Popcorn oder Wachsmals:</u> Kolben: Anzahl Farben der Körner	<u>Sólo variedades con mazorca con tipo de grano: dulce, palomero o ceroso:</u> Mazorca: número de colores de los granos		
QL		one	une	eine	uno	Jubilee (SC)	1
	(e)	two	deux	zwei	dos	Eolrukchal-ilho, Serendipity (SC)	2
38. (*)	92-93 (S) VG	Ear: <u>main</u> color of top of grain	Épi: couleur <u>principale</u> du sommet du grain	Kolben: <u>Hauptfarbe</u> der Kornkrone	Mazorca: color <u>principal</u> del extremo superior del grano		
PQ	(d)	white	blanc	weiß	blanco	A188, Pure white (SC), Snowbelle (SC), Sugar Purple (SC)	1
	(e)	yellowish white	blanc jaunâtre	gelblich weiß	blanco amarillento		2
		yellow	jaune	gelb	amarillo	F259, <u>SSActivate (SC)</u>	3
		yellow orange	jaune orangé	gelborange	amarillo anaranjado	F2, Gyöngymazsola (SC)	4
		orange	orange	orange	naranja	F257, GH 2547 (SC)	5
		red orange	rouge orangé	rotorange	naranja rojizo	Dynasty (SC)	6
		red	rouge	rot	rojo		7
		purple	pourpre	purpur	púrpura	<u>Dynared (SC)</u> , <u>Wild Violet (SC)</u>	8
		brownish	brunâtre	bräunlich	amarronado	Zenith (SC)	9
		blue black	noir-bleu	blauschwarz	negro azulado	Miheukchal	10

Proposed addition of new characteristic and explanation "Ear: secondary color of grain"

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
<b>NEW</b> (after 38.) (*) (+)	<b>VG</b> 92-93	<u>Only for sweet, pop or waxy varieties with Ear: number of colors of grains: two: Ear: secondary color of top of grain</u>				
<b>PQ</b>	white				SSActivate (SC), Wild Violet (SC)	1
	yellowish white					2
	yellow					3
	yellow orange					4
	orange					5
	red orange					6
	red					7
	purple				Sugar Purple (SC)	8
	brownish					9
	blue black					10

Ad. NEW (after 38.): Only for sweet, pop or waxy varieties with Ear: number of colors of grains: two: Ear: secondary color of top of grain

The color with the largest surface area is the main color; the one with the second largest area is the secondary color.

In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, [the darkest color] is considered to be the main color.

Note: caution should be taken if no full isolation of varieties with different colors in the trial is practiced. Cross pollination from other samples can in that case cause small amounts of grain with a different color which do not belong to the variety. Hence the variety is not a variety with two colors (bicolor variety) of itself.

#### Revision of the Technical Questionnaire

##### *Section 5 "Characteristics of the variety to be indicated"*

The following new characteristic is proposed for inclusion in Section 5 of the Technical Questionnaire:

- NEW (after 38.): Only for sweet, pop or waxy varieties with Ear: number of colors of grains: two:  
Ear: secondary color of top of grain

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