

Technical Committee

TC/59/12

Fifty-Ninth Session  
Geneva, October 23 and 24, 2023

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## PARTIAL REVISION OF THE TEST GUIDELINES FOR CARROT

*Document prepared by the Office of the Union*

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1. The purpose of this document is to present a proposal for a partial revision of the Test Guidelines for Carrot (document TG/49/8 Corr.) for inclusion of characteristics from the Table of Characteristics in the Technical Questionnaire.
2. The Technical Working Party for Vegetables (TWV), at its fifty-seventh session<sup>1</sup>, considered document TWV/57/6 “Partial revision of the Test Guidelines for Carrot” and agreed to propose the inclusion of the following characteristics in the TQ (characteristics for inclusion indicated in highlight and underline) (see document TWV/57/26 “Report”, paragraph 62):

Char. No.	(*)	Characteristic Name
3	(*)	Leaf: length (including petiole)
5	(*)	Leaf: intensity of green color
6	(*)	<u>Leaf: anthocyanin coloration of petiole</u>
7	(*)	Root: length
8	(*)	Root: width
9	(*)	<u>Root: ratio length/width</u>
10	(*)	Root: shape in longitudinal section
12	(*)	Root: shape of shoulder
13	(*)	Root: tip (when fully developed)
14	(*)	Root: external color
15		<u>Excluding varieties with white external root color:</u> Root: intensity of external color
16		<u>Root: anthocyanin coloration of skin of shoulder</u>
19	(*)	<u>Root: diameter of core relative to total diameter</u>
20	(*)	Root: color of core
22	(*)	<u>Root: color of cortex</u>
27		<u>Varieties with blunt tip only: Root: time of development of rounded tip</u>
28		<u>Root: time of coloration of tip in longitudinal section</u>
29		<u>Plant: tendency to bolting</u>
31	(*)	Plants: proportion of male sterile plants
32	(*)	Plant: type of male sterility

<sup>1</sup> held in Antalya, Türkiye, from May 1 to 5, 2023

3. The proposed additions to TQ 5 are presented in highlight and underline (in English only).

TECHNICAL QUESTIONNAIRE		Page {x} of {y}	Reference Number:
5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).			
Characteristics	Example Varieties	Note	
<b>5.1 Leaf: length (including petiole)</b> <b>(3)</b>			
very short	Mokum, Mignon	1[ ]	
<u>very short to short</u>		<u>2[ ]</u>	
short	Amsterdam 2, Amsterdam 3	3[ ]	
<u>short to medium</u>		<u>4[ ]</u>	
medium	Juwarot, Nantaise améliorée 2	5[ ]	
<u>medium to long</u>		<u>6[ ]</u>	
long	Chantenay, Chantenay à cœur rouge 2	7[ ]	
<u>long to very long</u>		<u>8[ ]</u>	
very long	De Colmar à cœur rouge 2, Rothild	9[ ]	
<b>5.2 Leaf: intensity of green color</b> <b>(5)</b>			
<u>very light</u>		<u>1[ ]</u>	
<u>very light to light</u>		<u>2[ ]</u>	
light	Adelaide, Leonor	3[ ]	
<u>light to medium</u>		<u>4[ ]</u>	
medium	Amsterdam 2, Amsterdam 3	5[ ]	
<u>medium to dark</u>		<u>6[ ]</u>	
dark	Rothild	7[ ]	
<u>dark to very dark</u>		<u>8[ ]</u>	
<u>very dark</u>		<u>9[ ]</u>	
<b>5.3 Leaf: anthocyanin coloration of petiole</b> <b>(6)</b>			
<u>absent</u>	<u>Amsterdam 2</u>	<u>1[ ]</u>	
<u>present</u>	<u>Tarenco</u>	<u>9[ ]</u>	

TECHNICAL QUESTIONNAIRE		Page {x} of {y}	Reference Number:
Characteristics	Example Varieties	Note	
<b>5.3 4</b> (7)	<b>Root: length</b>		
very short	Parijse Markt 2, Parijse Markt 3	1[ ]	
<u>very short to short</u>		2[ ]	
short	Chantenay	3[ ]	
<u>short to medium</u>		4[ ]	
medium	Nantaise améliorée 2, Nantaise améliorée 3	5[ ]	
<u>medium to long</u>		6[ ]	
long	Berlikumer 2, Berlikumer 3	7[ ]	
<u>long to very long</u>		8[ ]	
very long	Lange Stompe Winter	9[ ]	
<b>5.4 5</b> (8)	<b>Root: width</b>		
<u>very narrow</u>		1[ ]	
<u>very narrow to narrow</u>		2[ ]	
narrow	Amsterdam 2, Amsterdam 3	3[ ]	
<u>narrow to medium</u>		4[ ]	
medium	Nantaise améliorée 2, Nantaise améliorée 3	5[ ]	
<u>medium to broad</u>		6[ ]	
broad	De Colmar à cœur rouge 2, Parijse Markt 2, Parijse Markt 3	7[ ]	
<u>broad to very broad</u>		8[ ]	
<u>very broad</u>		9[ ]	

TECHNICAL QUESTIONNAIRE		Page {x} of {y}	Reference Number:
Characteristics	Example Varieties	Note	
<b>5.6 (9)</b> <b>Root: ratio length/ width</b>			
very small	Parijse Markt 2, Parijse Markt 3, Parmex	1[ ]	
very small to small		2[ ]	
small	Courte améliorée à forcer	3[ ]	
small to medium		4[ ]	
medium	Chantenay	5[ ]	
medium to large		6[ ]	
large	Nantaise améliorée 2, Nantaise améliorée 3	7[ ]	
large to very large		8[ ]	
very large	Amsterdam 2	9[ ]	
<b>5.5 7 (10)</b> <b>Root: shape in longitudinal section</b>			
circular	Parijse Markt 2, Parijse Markt 3	1[ ]	
obovate		2[ ]	
medium obtriangular	Chantenay, De Colmar à cœur rouge 2	3[ ]	
narrow obtriangular	Imperator, De Colmar à cœur rouge 3	4[ ]	
narrow obtriangular to narrow oblong	Maestro	5[ ]	
narrow oblong	Amsterdam 2, Berlikumer 2, Berlikumer 3, Nantaise améliorée 5, Touchon	6[ ]	
<b>5.6 8 (12)</b> <b>Root: shape of shoulder</b>			
flat	De Colmar à cœur rouge 2	1[ ]	
flat to rounded	Parijse Markt 2	2[ ]	
rounded		3[ ]	
rounded to conical		4[ ]	
conical	Touchon	5[ ]	
<b>5.7 9 (13)</b> <b>Root: tip (when fully developed)</b>			
blunt	Berlikumer 3	1[ ]	
slightly pointed	Mello Yello	2[ ]	
strongly pointed	Allred, Orbit	3[ ]	

TECHNICAL QUESTIONNAIRE		Page {x} of {y}	Reference Number:
Characteristics	Example Varieties	Note	
<b>5.8 10</b> <b>(14)</b>	<b>Root: external color</b>		
white	White Satin	1[ ]	
yellow	Mello Yello	2[ ]	
orange	Bingo, Goliath, Karotan, Pinocchio, Tancar	3[ ]	
pinkish red	Nutri-red	4[ ]	
red	Pulsor	5[ ]	
purple	Purple Haze	6[ ]	
<b>5.9 11</b> <b>(15)</b>	<b><u>Excluding varieties with white external root color:</u> Root: intensity of external color</b>		
<u>very light</u>		<u>1[ ]</u>	
<u>very light to light</u>		<u>2[ ]</u>	
light	Bingo, Mello Yello, Tancar	3[ ]	
<u>light to medium</u>		<u>4[ ]</u>	
medium	Goliath, Nutri-red	5[ ]	
<u>medium to dark</u>		<u>6[ ]</u>	
dark	Karotan, Pinocchio, Purple Haze	7[ ]	
<u>dark to very dark</u>		<u>8[ ]</u>	
<u>very dark</u>		<u>9[ ]</u>	
<b>5.12</b> <b>(16)</b>	<b><u>Root: anthocyanin coloration of skin of shoulder</u></b>		
<u>absent</u>	<u>Trevor</u>	<u>1[ ]</u>	
<u>present</u>	<u>Touchon</u>	<u>9[ ]</u>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
<b>5.13</b> <b>(19)</b> <b><u>Root: diameter of core relative to total diameter</u></b>		
<u>very small</u>	<u>Amsterdam 2, Amsterdam 3,</u> <u>Tourino</u>	<u>1[ ]</u>
<u>very small to small</u>		<u>2[ ]</u>
<u>small</u>	<u>Nantaise améliorée 2, Nantaise</u> <u>améliorée 3</u>	<u>3[ ]</u>
<u>small to medium</u>		<u>4[ ]</u>
<u>medium</u>	<u>Berlikumer 2, Berlikumer 3</u>	<u>5[ ]</u>
<u>medium to large</u>		<u>6[ ]</u>
<u>large</u>	<u>De Colmar à cœur rouge 2</u>	<u>7[ ]</u>
<u>large to very large</u>		<u>8[ ]</u>
<u>very large</u>	<u>Giganta</u>	<u>9[ ]</u>
<b>5.10 14</b> <b>(20)</b> <b><u>Root: color of core</u></b>		
white	White Satin	1[ ]
yellow	Jaune de Lobberich, Pariser Markt	2[ ]
orange	Nantaise améliorée 2, Nantaise améliorée 3	3[ ]
pinkish red		4[ ]
red	Nutri-red	5[ ]
purple	Afghan purple, Black Deshi	6[ ]
<b>5.15</b> <b>(22)</b> <b><u>Root: color of cortex</u></b>		
<u>white</u>	<u>White Satin</u>	<u>1[ ]</u>
<u>yellow</u>	<u>Mellow Yello</u>	<u>2[ ]</u>
<u>orange</u>	<u>Allred, Carlo</u>	<u>3[ ]</u>
<u>pinkish red</u>		<u>4[ ]</u>
<u>red</u>	<u>Nutri-red</u>	<u>5[ ]</u>
<u>purple</u>	<u>Afghan purple, Black Deshi</u>	<u>6[ ]</u>

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
<b>5.16</b> <b>(27)</b>	<b>Varieties with blunt tip only: Root: time of development of rounded tip</b>	
<u>very early</u>		1[ ]
<u>very early to early</u>		2[ ]
<u>early</u>	<u>Touchon</u>	3[ ]
<u>early to medium</u>		4[ ]
<u>medium</u>	<u>Nantaise améliorée 2,</u> <u>Nantaise améliorée 3, Tiana</u>	5[ ]
<u>medium to late</u>		6[ ]
<u>late</u>	<u>Bureau, Nantaise améliorée 7,</u> <u>Tancar</u>	7[ ]
<u>late to very late</u>		8[ ]
<u>very late</u>		9[ ]
<b>5.17</b> <b>(28)</b>	<b>Root: time of coloration of tip in longitudinal section</b>	
<u>very early</u>	<u>Parijse Markt 3</u>	1[ ]
<u>very early to early</u>		2[ ]
<u>early</u>	<u>Amsterdam 2, Amsterdam 3</u>	3[ ]
<u>early to medium</u>		4[ ]
<u>medium</u>	<u>Nantaise améliorée 2, Nantaise</u> <u>améliorée 3</u>	5[ ]
<u>medium to late</u>		6[ ]
<u>late</u>	<u>De Colmar à cœur rouge 2,</u> <u>Touchon</u>	7[ ]
<u>late to very late</u>		8[ ]
<u>very late</u>	<u>Goliath</u>	9[ ]

TECHNICAL QUESTIONNAIRE		Page {x} of {y}	Reference Number:
Characteristics		Example Varieties	Note
<b>5.18</b>	<b>Plant: tendency to bolting</b>		
<b>(29)</b>			
	very weak		1[ ]
	very weak to weak		2[ ]
	weak	Molene, Tancar	3[ ]
	weak to medium		4[ ]
	medium	Nantaise améliorée 2, Nantaise améliorée 3	5[ ]
	medium to strong		6[ ]
	strong	Muscade, Touchon	7[ ]
	strong to very strong		8[ ]
	very strong		9[ ]
<b>5.14 19</b>	<b>Plants: proportion of male sterile plants</b>		
<b>(31)</b>			
	absent or very low	Nantaise améliorée 2, Touchon	1[ ]
	intermediate		2[ ]
	high	Nanco, Tino	3[ ]
<b>5.12 20</b>	<b>Plant: type of male sterility</b>		
<b>(32)</b>			
	brown anther	Nanco	1[ ]
	petaloid anther	Tino	2[ ]

[Annex follows]