



TWV/39/7

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FOR
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PROJECT TO CONSIDER THE PUBLICATION OF VARIETY DESCRIPTIONS
(REPORT OF THE COORDINATOR FOR CHINESE CABBAGE)

Document prepared by an expert from Japan

1. The Annex to this document presents the analysis of the data received for the model study on Chinese Cabbage.
2. The analysis can be summarized as follows:

Pseudo-Qualitative Characteristics

Averages of “Number of frequency” range between 1.23 and 1.64.

Quantitative Characteristics

Averages of “Number of frequency” range between 1.37 and 2.00.

Average of “Number of frequency” of “Head: width” is the smallest, 1.37, and “Time of bolting” is the largest, 2.00.

Averages of “Range” range between 0.37 and 2.50. Average of “Range” of “Head: width” is the smallest, 0.37, and “Time of bolting” is the largest, 2.50.

Averages of “Standard Deviation” range between 0.26 and 1.77. Average of “Standard Deviation” of “Head: width” is the smallest, 0.26, and “Time of bolting” is the largest, 1.77.

[Annex follows]

(2) Quantitative characteristics														
Characteristic:	Plant: height	TG/105/4					Char. 1					AVERAGE		
Variety	Number of descriptions provided			short		medium		tall				1.62	0.73	0.51
		1	2	3	4	5	6	7	8	9		Number of frequencies	Range	Standard Deviation
Chinlee (Barum)	2				1	1						2	1	0.71
Bilko	2				1	1						2	1	0.71
Chiko	2							2				1	0	0.00
Chorus	2					2						1	0	0.00
Darek	2				1	1						2	1	0.71
Disco = Disko	2					1	1					2	1	0.71
Elliot	2			2								1	0	0.00
Green Rocket	3							2	1			2	1	0.58
Kingdom 65	2					1	1					2	1	0.71
Manoko	2					2						1	0	0.00
Nagaoka King(Oushou)	2					1	1					2	1	0.71
Nekita	2					2						1	0	0.00
Nerva	2				2							1	0	0.00
Obelisk(Harumaki-gokuwase	2				1	1						2	1	0.71
Optiko	2					2						1	0	0.00
Osiris(Taiby-60nichi)	2			1		1						2	2	1.41
Parkin	3				1	2						2	1	0.58
Regina(50nichi)	2				1	1						2	1	0.71
Solado	2					2						1	0	0.00
Sprinkin(Norangmanjeom	2			1		1						2	2	1.41
Storkin	2				1	1						2	1	0.71
Taranko	2						1	1				2	1	0.71
Victor	2				1	1						2	1	0.71
Vitimo	2			2								1	0	0.00
Yamiko	2			1		1						2	2	1.41
Yuki	2					2						1	0	0.00

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Characteristic: Variety	Outer leaf attitude						TG/105/4		Char.2		AVERAGE		
	Number of descriptions provided	Notes		erect	semi-erect			horizontal			1.58	0.81	0.57
											Number of frequencies	Range	Standard Deviation
											1	2	3
Chinlee (Barum)	2				2					1	0	0.00	
Bilko	2			1	1					2	2	1.41	
Chiko	2			2						1	0	0.00	
Chorus	2				1	1				2	1	0.71	
Darek	2				1	1				2	1	0.71	
Disco = Disko	2					2				1	0	0.00	
Elliot	2					1	1			2	1	0.71	
Green Rocket	3			2	1					2	1	0.58	
Kingdom 65	2			1	1					2	2	1.41	
Manoko	2			1	1					2	2	1.41	
Nagaoka King(Oushou)	2				1	1				2	1	0.71	
Nekita	2					2				1	0	0.00	
Nerva	2					1	1			2	1	0.71	
Obelisk(Harumaki-gokuwase)	2					2				1	0	0.00	
Optiko	2					2				1	0	0.00	
Osiris(Taiby-60nichi)	2			1	1					2	2	1.41	
Parkin	3					3				1	0	0.00	
Regina(50nichi)	2			1	1					2	1	0.71	
Solado	2					2				1	0	0.00	
Sprinkin(Norangmanjeom)	2					2				1	0	0.00	
Storkin	2			1	1					2	2	1.41	
Taranko	2			2						1	0	0.00	
Victor	2				1	1				2	1	0.71	
Vitimo	2				1	1				2	1	0.71	
Yamiko	2			1	1					2	2	1.41	
Yuki	2					2				1	0	0.00	

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Characteristic: Variety	Outer leaf: size						TG/105/4				Char. 3			
	Number of descriptions provided	Notes	1	2	small 3	4	medium 5	6	large 7	8	9	AVERAGE		
												1.58	0.81	0.56
												Number of frequencies	Range	Standard Deviation
1	2	3	4	5	6	7	8	9						
Chinlee (Barum)	2					1	1					2	1	0.71
Bilko	2					1	1					2	1	0.71
Chiko	2					1		1				2	2	1.41
Chorus	2					1		1				2	2	1.41
Darek	2					1	1					2	1	0.71
Disco = Disko	2					1		1				2	2	1.41
Elliot	2					2						1	0	0.00
Green Rocket	3					1		2				2	2	1.15
Kingdom 65	2					1	1					2	1	0.71
Manoko	2					2						1	0	0.00
Nagaoka King(Oushou)	2						2					1	0	0.00
Nekita	2					2						1	0	0.00
Nerva	2					1		1				2	2	1.41
Obelisk(Harumaki-gokuwase	2				1		1					2	2	1.41
Optiko	2					1	1					2	1	0.71
Osiris(Taibyō-60nichi)	2				1	1						2	1	0.71
Parkin	3						2	1				2	1	0.58
Regina(50nichi)	2					2						1	0	0.00
Solado	2							2				1	0	0.00
Sprinkin(Norangmanjeom	2					2						1	0	0.00
Storkin	2					2						1	0	0.00
Taranko	2					1	1					2	1	0.71
Victor	2					2						1	0	0.00
Vitimo	2				1	1						2	1	0.71
Yamiko	2					2						1	0	0.00
Yuki	2						2					1	0	0.00

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Characteristic: Variety	Outer leaf: blistering						TG/105/4		Char. 5		AVERAGE		
	Number of descriptions provided	Notes		weak		medium		strong			1.65	1.04	0.72
											Number of frequencies	Range	Standard Deviation
											1	2	3
Chinlee (Barum)	2					2					1	0	0.00
Bilko	2						1	1			2	1	0.71
Chiko	2			2							1	0	0.00
Chorus	2	1				1					2	4	2.83
Darek	2				1			1			2	3	2.12
Disco = Disko	2				2						1	0	0.00
Elliot	2					2					1	0	0.00
Green Rocket	3			2	1						2	1	0.58
Kingdom 65	2			1		1					2	2	1.41
Manoko	2					1		1			2	2	1.41
Nagaoka King(Oushou)	2				2						1	0	0.00
Nekita	2			1		1					2	2	1.41
Nerva	2			1	1						2	1	0.71
Obelisk(Harumaki-gokuwase)	2					1	1				2	1	0.71
Optiko	2					2					1	0	0.00
Osiris(Taiby-60nichi)	2			1		1					2	2	1.41
Parkin	3					2	1				2	1	0.58
Regina(50nichi)	2					1	1				2	1	0.71
Solado	2					1	1				2	1	0.71
Sprinkin(Norangmanjeom)	2					1	1				2	1	0.71
Storkin	2			2							1	0	0.00
Taranko	2			2							1	0	0.00
Victor	2				1	1					2	1	0.71
Vitimo	2							2			1	0	0.00
Yamiko	2			1		1					2	2	1.41
Yuki	2					1	1				2	1	0.71

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Characteristic: Variety	Outer leaf: size of blister						TG/105/4		Char. 6		AVERAGE		
	Number of descriptions provided	Notes		small		medium		strong			1.55	0.75	0.53
											Number of frequencies	Range	Standard Deviation
											1	2	3
Chinlee (Barum)	2					1		1			2	1	0.71
Bilko	2				1	1					2	1	0.71
Chiko	2			1		1					2	2	1.41
Chorus	2												
Darek	2					1		1			2	1	0.71
Disco = Disko	2					2					1	0	0.00
Elliot	2					2					1	0	0.00
Green Rocket	2				1	1					2	1	0.71
Kingdom 65	2					1		1			2	2	1.41
Manoko	2				1	1					2	1	0.71
Nagaoka King(Oushou)	2												
Nekita	2					1		1			2	2	1.41
Nerva	2					2					1	0	0.00
Obelisk(Harumaki-gokuwase)	2												
Optiko	2					2					1	0	0.00
Osiris(Taibyō-60nichi)	2												
Parkin	2				1	1					2	1	0.71
Regina(50nichi)	2												
Solado	2					2					1	0	0.00
Sprinkin(Norangmanjeom)	2					2					1	0	0.00
Storkin	2					2					1	0	0.00
Taranko	2			1		1					2	2	1.41
Victor	2												
Vitimo	2					2					1	0	0.00
Yamiko	2					2					1	0	0.00
Yuki	2					1		1			2	1	0.71

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Characteristic: Variety	Outer leaf: intensity of color						TG/105/4		Char.8		AVERAGE		
	Number of descriptions provided	Notes		light	medium	dark	6	7	8	9	1.58	0.77	0.52
											Number of frequencies	Range	Standard Deviation
		1	2								3	4	5
Chinlee (Barum)	2				2					1	0	0.00	
Bilko	2						2			1	0	0.00	
Chiko	2					2				1	0	0.00	
Chorus	2				2					1	0	0.00	
Darek	2					1				2	2	1.41	
Disco = Disko	2				2					1	0	0.00	
Elliot	2				1	1				2	1	0.71	
Green Rocket	3				1	1	1			3	2	1.00	
Kingdom 65	2				1			1		2	3	2.12	
Manoko	2				2					1	0	0.00	
Nagaoka King(Oushou)	2				1	1				2	1	0.71	
Nekita	2					2				1	0	0.00	
Nerva	2			1	1					2	1	0.71	
Obelisk(Harumaki-gokuwase	2				1	1				2	1	0.71	
Optiko	2				2					1	0	0.00	
Osiris(Taibyō-60nichi)	2				1	1				2	2	1.41	
Parkin	3					1	2			2	1	0.58	
Regina(50nichi)	2				1	1				2	1	0.71	
Solado	2				2					1	0	0.00	
Sprinkin(Norangmanjeom	2				2					1	0	0.00	
Storkin	2				1		1			2	2	1.41	
Taranko	2				2					1	0	0.00	
Victor	2				2					1	0	0.00	
Vitimo	2					1	1			2	1	0.71	
Yamiko	2					1	1			2	1	0.71	
Yuki	2				1	1				2	1	0.71	

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Characteristic: Variety	Outer leaf: glossiness						TG/105/4		Char.9		AVERAGE		
	Number of descriptions provided	Notes		weak	medium			strong			1.84	1.63	1.15
											Number of frequencies	Range	Standard Deviation
											1	2	3
Chinlee (Barum)	2					1		1			2	3	2.12
Bilko	2						1	1			2	1	0.71
Chiko	2												
Chorus	2				1		1				2	1	0.71
Darek	2					1		1			2	3	2.12
Disco = Disko	2						1				2	1	0.71
Elliot	2				1	1					2	1	0.71
Green Rocket	3												
Kingdom 65	2												
Manoko	2					1	1				2	1	0.71
Nagaoka King(Oushou)	2					1		1			2	3	2.12
Nekita	2					1	1				2	2	1.41
Nerva	2												
Obelisk(Harumaki-gokuwase)	2												
Optiko	2					1	1				2	1	0.71
Osiris(Taiby-60nichi)	2												
Parkin	2						2				1	0	0.00
Regina(50nichi)	2						2				1	0	0.00
Solado	2					1	1				2	1	0.71
Sprinkin(Norangmanjeom)	2				1	1					2	1	0.71
Storkin	2			2							1	0	0.00
Taranko	2			1			1				2	3	2.12
Victor	2												
Vitimo	2			1				1			2	4	2.83
Yamiko	2			1		1					2	2	1.41
Yuki	2					1		1			2	3	2.12

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Characteristic: Variety	Outer leaf: hairness						TG/105/4		Char. 10		AVERAGE			
	Number of descriptions provided	Notes	1	2	weak 3	4	medium 5	6	7	strong 8	9	1.82	1.53	1.08
												Number of frequencies	Range	Standard Deviation
												1	2	3
Chinlee (Barum)	2					1	1					2	1	0.71
Bilko	2		1			1						2	3	2.12
Chiko	2													
Chorus	2					2						1	0	0.00
Darek	2				1	1						2	1	0.71
Disco = Disko	2			1		1						2	2	1.41
Elliot	2				1	1						2	1	0.71
Green Rocket	3													
Kingdom 65	2													
Manoko	2			1		1						2	2	1.41
Nagaoka King(Oushou)	2													
Nekita	2			1			1					2	3	2.12
Nerva	2													
Obelisk(Harumaki-gokuwase)	2													
Optiko	2			1			1					2	3	2.12
Osiris(Taiby-60nichi)	2													
Parkin	2			1		1						2	2	1.41
Regina(50nichi)	2													
Solado	2				1	1						2	1	0.71
Sprinkin(Norangmanjeom)	2			1		1						2	2	1.41
Storkin	2					1		1				2	2	1.41
Taranko	2				1	1						2	1	0.71
Victor	2													
Vitimo	2					2						1	0	0.00
Yamiko	2					2						1	0	0.00
Yuki	2				1		1					2	2	1.41

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Characteristic: Variety	Outer leaf: undulation of margin						TG/105/4 Char. 12				AVERAGE		
	Number of descriptions provided	absent or very weak		very weak		medium		strong		very strong	1.92	1.88	1.28
											Number of frequencies	Range	Standard Deviation
											1	2	3
Chinlee (Barum)	2				1	1					2	1	0.71
Bilko	2			1		1					2	2	0.71
Chiko	2			1			1				2	4	2.83
Chorus	2	1		1							2	2	1.41
Darek	2	1				1					2	4	2.83
Disco = Disko	2			1		1					2	2	1.41
Elliot	2			1	1						2	1	0.71
Green Rocket	3				1		1	1			3	3	1.53
Kingdom 65	2	1				1					2	4	2.83
Manoko	2	1		1							2	2	1.41
Nagaoka King(Oushou)	2	1			1						2	3	2.83
Nekita	2			1	1						2	1	0.71
Nerva	2	1		1							2	2	1.41
Obelisk(Harumaki-gokuwase)	2			1		1					2	2	1.41
Optiko	2				1	1					2	1	0.71
Osiris(Taibyo-60nichi)	2					2					1	0	0.00
Parkin	3			2		1					2	2	0.58
Regina(50nichi)	2			1		1					2	2	1.41
Solado	2			1		1					2	2	1.41
Sprinkin(Norangmanjeom)	2			2							1	0	0.00
Storkin	2		1	1							2	1	0.71
Taranko	2					1			1		2	3	2.12
Victor	2			2							1	0	0.00
Vitimo	2			1		1					2	2	1.41
Yamiko	2			1	1						2	1	0.71
Yuki	2				1		1				2	2	1.41

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Characteristic: Variety	Outer leaf: incision of margin (at distal part)					TG/105/4		Char.13		AVERAGE		
	Number of descriptions provided	absent or very weak		weak	medium		strong	very strong	1.79	1.67	1.11	
									Number of frequencies	Range	Standard Deviation	
									1	2	3	4
Chinlee (Barum)	2											
Bilko	2	1		1						2	2	1.41
Chiko	2	1		1						2	2	1.41
Chorus	2	2								1	0	0.00
Darek	2		1		1					2	3	2.12
Disco = Disko	2			2						1	0	0.00
Elliot	2											
Green Rocket	3	1		1	1					3	5	2.12
Kingdom 65	2	2								1	0	0.00
Manoko	2	1		1						2	2	1.41
Nagaoka King(Oushou)	2	1	1							2	1	0.71
Nekita	2	1	1							2	1	0.71
Nerva	2	2								1	0	0.00
Obelisk(Harumaki-gokuwase)	2	1		1						2	2	1.41
Optiko	2	1		1						2	2	1.41
Osiris(Taiby-60nichi)	2	1			1					2	3	2.12
Parkin	3		2	1						2	1	0.58
Regina(50nichi)	2	1			1					2	4	2.83
Solado	2		2							1	0	0.00
Sprinkin(Norangmanjeom)	2			2						1	0	0.00
Storkin	2	1	1							2	1	0.71
Taranko	2			1	1					2	2	1.41
Victor	2		1	1						2	1	0.71
Vitimo	2	1			1					2	4	2.83
Yamiko	2	1		1						2	2	1.41
Yuki	2	1		1						2	2	1.41

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Characteristic:	Outer leaf: serration of margin(at base)					TG/105/4 Char. 14					AVERAGE		
Variety	Number of descriptions provided	absent or very weak		weak		medium		strong		very strong	1.92	2.58	1.65
											Number of frequencies	Range	Standard Deviation
		1	2	3	4	5	6	7	8	9			
Chinlee (Barum)	2						1	1			2	1	0.71
Bilko	2					1		1			2	2	1.41
Chiko	2												
Chorus	2												
Darek	2			1				1			2	4	2.83
Disco = Disko	2												
Elliot	2				1			1			2	3	2.12
Green Rocket	3												
Kingdom 65	2												
Manoko	2					1		1			2	2	1.41
Nagaoka King(Oushou)	2												
Nekita	2			1				1			2	4	2.83
Nerva	2												
Obelisk(Harumaki-gokuwase	2												
Optiko	2												
Osiris(Taiby-60nichi)	2												
Parkin	3												
Regina(50nichi)	2												
Solado	2			1				1			2	4	2.83
Sprinkin(Norangmanjeom	2					2					1	0	0.00
Storkin	2					1		1			2	2	1.41
Taranko	2												
Victor	2												
Vitimo	2					1		1			2	2	1.41
Yamiko	2			1				1			2	4	2.83
Yuki	2				1			1			2	3	0.00

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Characteristic: Variety	Head : height						TG/105/4		Char. 17		AVERAGE		
	Number of descriptions provided	Notes		short	medium			tall			1.94	1.39	0.96
											Number of frequencies	Range	Standard Deviation
											1	2	3
Chinlee (Barum)	2				1	1					2	1	0.71
Bilko	2					2					1	0	0.00
Chiko	2												
Chorus	2												
Darek	2				1		1				2	2	1.41
Disco = Disko	2					2					1	0	0.00
Elliot	2			1		1					2	2	1.41
Green Rocket	2							1	1		2	1	0.71
Kingdom 65	2												
Manoko	2			1		1					2	2	1.41
Nagaoka King(Oushou)	2												
Nekita	2			1		1					2	2	1.41
Nerva	2												
Obelisk(Harumaki-gokuwase)	2												
Optiko	2			1			1				2	3	2.12
Osiris(Taibyo-60nichi)	2												
Parkin	3			1	1	1					3	2	1.00
Regina(50nichi)	2												
Solado	2				1	1					2	1	0.71
Sprinkin(Norangmanjeom)	2			1		1					2	2	1.41
Storkin	2			1	1						2	1	0.71
Taranko	2					1	1				2	1	0.71
Victor	2				1	1					2	1	0.71
Vitimo	2			1	1						2	1	0.71
Yamiko	2			1		1					2	2	1.41
Yuki	2				1	1					2	1	0.71

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Characteristic: Variety	Head: width Number of descriptions provided	Notes	TG/105/4					Char.18				AVERAGE		
			1	2	narrow 3	4	medium 5	6	broad 7	8	9	1.37	0.37	0.26
												Number of frequencies	Range	Standard Deviation
Chinlee (Barum)	2					2					1	0	0.00	
Bilko	2					2					1	0	0.00	
Chiko	2			1	1						2	1	0.71	
Chorus	2													
Darek	2					1	1				2	1	0.71	
Disco = Disko	2					1	1				2	1	0.71	
Elliot	2					2					1	0	0.00	
Green Rocket	2			2							1	0	0.00	
Kingdom 65	2													
Manoko	2				1	1					2	1	0.71	
Nagaoka King(Oushou)	2													
Nekita	2				1	1					2	1	0.71	
Nerva	2													
Obelisk(Harumaki-gokuwase)	2													
Optiko	2					2					1	0	0.00	
Osiris(Taibyō-60nichi)	2													
Parkin	3					3					1	0	0.00	
Regina(50nichi)	2													
Solado	2							2			1	0	0.00	
Sprinkin(Norangmanjeom)	2					2					1	0	0.00	
Storkin	2					2					1	0	0.00	
Taranko	2					2					1	0	0.00	
Victor	2					2					1	0	0.00	
Vitimo	2					1	1				2	1	0.71	
Yamiko	2					2					1	0	0.00	
Yuki	2					1	1				2	1	0.71	

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Characteristic: Variety	Head : shape in longitudinal section						TG/105/4 Char.19				AVERAGE		
	Number of descriptions provided	oblong	elliptic	broad elliptic	circular	ovate	broad ovate	7	8	9	1.58	0.92	0.62
											Number of frequencies	Range	Standard Deviation
											1	2	3
Chinlee (Barum)	2		1	1							2	1	0.71
Bilko	2		2								1	0	0.00
Chiko	2	2									1	0	0.00
Chorus	2			1		1					2	2	1.41
Darek	2		1	1							2	1	0.71
Disco = Disko	2		2								1	0	0.00
Elliot	2			2							1	0	0.00
Green Rocket	3	3									1	0	0.00
Kingdom 65	2			1	1						2	1	0.71
Manoko	2	1	1								2	1	0.71
Nagaoka King(Oushou)	2			2							1	0	0.00
Nekita	2	1	1								2	1	0.71
Nerva	2		1			1					2	3	2.12
Obelisk(Harumaki-gokuwase)	2				1	1					2	1	0.71
Optiko	2		2								1	0	0.00
Osiris(Taiby-60nichi)	2			2							1	0	0.00
Parkin	3		2	1							2	1	0.58
Regina(50nichi)	2			2							1	0	0.00
Solado	2	1		1							2	2	0.71
Sprinkin(Norangmanjeom)	2	1	1								2	1	0.71
Storkin	2		2								1	0	0.00
Taranko	2	2									1	0	0.00
Victor	2		1			1					2	3	2.12
Vitimo	2		1				1				2	4	2.83
Yamiko	2	1	1								2	1	0.71
Yuki	2		1	1							2	1	0.71

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Characteristic:	Head : intensity of color of wrapper leaf						TG/105/4 Char. 22				AVERAGE							
Variety	Number of descriptions provided	Notes		light	medium	dark	1	2	3	4	5	6	7	8	9	1.76	1.08	0.71
		1	2													3	4	5
		1	2	3	4	5	6	7	8	9	Number of frequencies	Range	Standard Deviation					
Chinlee (Barum)	2				1	1										2	1	0.71
Bilko	2					2										1	0	0.00
Chiko	2			1		1										2	2	1.41
Chorus	2				1	1										2	1	0.71
Darek	2					1	1									2	1	0.71
Disco = Disko	2			1		1										2	2	1.41
Elliot	2			2												1	0	0.00
Green Rocket	3					1	1	1								3	2	0.71
Kingdom 65	2			1			1									2	3	2.12
Manoko	2			1		1										2	2	1.41
Nagaoka King(Oushou)	2			1	1											2	1	0.71
Nekita	2			1		1										2	2	1.41
Nerva	2			1	1											2	1	0.71
Obelisk(Harumaki-gokuwase	2																	
Optiko	2			1	1											2	1	0.71
Osiris(Taiby-60nichi)	2			1		1										2	2	1.41
Parkin	3					2	1									2	1	0.00
Regina(50nichi)	2			1	1											2	1	0.71
Solado	2					2										1	0	0.00
Sprinkin(Norangmanjeom	2					2										1	0	0.00
Storkin	2				1	1										2	1	0.71
Taranko	2			2												1	0	0.00
Victor	2				1	1										2	1	0.71
Vitimo	2					2										1	0	0.00
Yamiko	2			1		1										2	2	1.41
Yuki	2					2										1	0	0.00

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Characteristic:	Head: blistering of wrapper leaf						TG/105/4 Char, 23				AVERAGE		
Variety	Number of descriptions provided	absent or very weak		weak		medium		strong		very strong	1.91	1.77	1.24
											Number of frequencies	Range	Standard Deviation
		1	2	3	4	5	6	7	8	9			
Chinlee (Barum)	2				1	1					2	1	0.71
Bilko	2					1		1			2	2	1.41
Chiko	2			1				1			2	4	2.83
Chorus	2				1			1			2	3	2.12
Darek	2					1	1				2	1	0.71
Disco = Disko	2						1	1			2	1	0.71
Elliot	2				1			1			2	3	2.12
Green Rocket	3			2	1						2	1	0.58
Kingdom 65	2			1		1					2	2	1.41
Manoko	2							2			1	0	0.00
Nagaoka King(Oushou)	2												
Nekita	2				1			1			2	3	2.12
Nerva	2						1	1			2	1	0.71
Obelisk(Harumaki-gokuwase	2												
Optiko	2					1		1			2	2	1.41
Osiris(Taibyō-60nichi)	2												
Parkin	3					2		1			2	2	1.15
Regina(50nichi)	2												
Solado	2				1			1			2	3	2.12
Sprinkin(Norangmanjeom	2					1	1				2	1	0.71
Storkin	2			1				1			2	4	2.83
Taranko	2					1	1				2	1	0.71
Victor	2				1	1					2	1	0.71
Vitimo	2							2			1	0	0.00
Yamiko	2					1		1			2	2	1.41
Yuki	2						1	1			2	1	0.71

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Characteristic: Variety	Head : firmness (at harvest maturity)					TG/105/4		Char. 25		AVERAGE		
	Number of descriptions provided	very weak		weak	medium		strong		very strong	1.65	1.22	0.86
										Number of frequencies	Range	Standard Deviation
										1	2	3
Chinlee (Barum)	2					2				1	0	0.00
Bilko	2			1	1					2	2	1.41
Chiko	2				1		1			2	3	2.12
Chorus	2				1	1				2	1	0.71
Darek	2					1	1			2	1	0.71
Disco = Disko	2				2					1	0	0.00
Elliot	2				1	1				2	2	1.41
Green Rocket	2			1		1				2	3	2.12
Kingdom 65	2				1	1				2	1	0.71
Manoko	2				2					1	0	0.00
Nagaoka King(Oushou)	2				1			1		2	4	2.83
Nekita	2				2					1	0	0.00
Nerva	2					1	1			2	1	0.71
Obelisk(Harumaki-gokuwase)	2											
Optiko	2				2					1	0	0.00
Osiris(Taibyō-60nichi)	2											
Parkin	2				1	1				2	1	0.71
Regina(50nichi)	2						1	1		2	1	0.71
Solado	2				2					1	0	0.00
Sprinkin(Norangmanjeom)	2				1		1			2	2	1.41
Storkin	2				1		1			2	2	1.41
Taranko	2				2					1	0	0.00
Victor	2											
Vitimo	2					1	1			2	1	0.71
Yamiko	2				2					1	0	0.00
Yuki	2			1		1				2	3	2.12

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Characteristic: Variety	Head: length of internal stem						TG/105/4		Char. 26		AVERAGE		
	Number of descriptions provided	Notes		short	medium			long			1.64	1.41	1.01
											Number of frequencies	Range	Standard Deviation
											1	2	3
Chinlee (Barum)	2			1	1						2	1	0.71
Bilko	2			1			1				2	3	2.12
Chiko	2	1						1			2	6	4.24
Chorus	2			1	1						2	1	0.71
Darek	2			1	1						2	1	0.71
Disco = Disko	2			2							1	0	0.00
Elliot	2			2							1	0	0.00
Green Rocket	3	1					1		1		2	5	4.04
Kingdom 65	2	1			1						2	3	2.12
Manoko	2			2							1	0	0.00
Nagaoka King(Oushou)	2												
Nekita	2		1	1							2	1	0.71
Nerva	2	1		1							2	2	1.41
Obelisk(Harumaki-gokuwase)	2												
Optiko	2			2							1	0	0.00
Osiris(Taibyo-60nichi)	2												
Parkin	3			2	1						2	2	1.15
Regina(50nichi)	2												
Solado	2			2							1	0	0.00
Sprinkin(Norangmanjeom)	2			2							1	0	0.00
Storkin	2			2							1	0	0.00
Taranko	2			1	1						2	2	1.41
Victor	2				1	1					2	1	0.71
Vitimo	2			1	1						2	1	0.71
Yamiko	2			2							1	0	0.00
Yuki	2			1	1						2	2	1.41

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Characteristic: Variety	Time of head formation						TG/105/4 Char.27				AVERAGE		
	Number of descriptions provided	very early 1	2	early 3	4	medium 5	6	late 7	8	very late 9	1.69	1.35	0.96
											Number of frequencies	Range	Standard Deviation
Chinlee (Barum)	2					2					1	0	0.00
Bilko	2					2					1	0	0.00
Chiko	2			1				1			2	4	2.83
Chorus	2					1		1			2	2	1.41
Darek	2				1			1			2	3	2.12
Disco = Disko	2					2					1	0	0.00
Elliot	2			1		1					2	2	1.41
Green Rocket	3				1	1	1				3	2	1.00
Kingdom 65	2					1	1				2	1	0.71
Manoko	2			2							1	0	0.00
Nagaoka King(Oushou)	2						1		1		2	2	1.41
Nekita	2			1			1				2	3	2.12
Nerva	2	1		1							2	2	1.41
Obelisk(Harumaki-gokuwase)	2	1		1							2	2	1.41
Optiko	2			2							1	0	0.58
Osiris(Taibyō-60nichi)	2		1		1						2	2	1.41
Parkin	3							3			1	0	0.00
Regina(50nichi)	2			1	1						2	1	0.71
Solado	2					1	1				2	1	0.71
Sprinkin(Norangmanjeom)	2			1		1					2	2	1.41
Storkin	2					1		1			2	2	1.41
Taranko	2						1	1			2	1	0.71
Victor	2					2					1	0	0.00
Vitimo	2		1			1					2	3	2.12
Yamiko	2					2					1	0	0.00
Yuki	2					2					1	0	0.00

(3) Summary

TG/105/4

(*) asterisked characteristic

(G) grouping characteristic

(1) Pseudo-qualitative characteristics

UPOV-Number	Characteristic	Average		
		Number of frequencies		
4	Outer Leaf: shape	1.43		
(*) 7	Outer leaf: color	1.23		
15	Outer leaf: shape of midrib in cross section	1.78		
20	Head: formation	1.64		
(*) 21	Head: color of wrapper leaf	1.40		
24	Head: internal color	1.50		

(2) Quantitative characteristics

UPOV-Number	Characteristic	Average		
		Number of frequencies	Range	Standard Deviation
(*) 1	Plant: height	1.62	0.73	0.51
2	Outer leaf: attitude	1.58	0.81	0.57
3	Outer leaf: size	1.58	0.81	0.56
(*) 5	Outer leaf: blistering	1.65	1.04	0.72
6	Outer leaf: size of blister	1.55	0.75	0.53
8	Outer leaf: intensity of color	1.58	0.77	0.52
9	Outer leaf: glossiness	1.84	1.63	1.15
10	Outer leaf: hairiness	1.82	1.53	1.08
11	Outer leaf: curvature in longitudinal section	1.83	2.33	1.65
(*) 12	Outer leaf: undulation of margin	1.92	1.88	1.28
13	Outer leaf: incision of margin (at distal part)	1.79	1.67	1.11
14	Outer leaf: serration of margin(at base)	1.92	2.58	1.65
16	Outer leaf: width of midrib (at base)	1.69	1.15	0.81
17	Head: height	1.94	1.39	0.96

18	Head: width	1.37	0.37	0.26
(G) (*) 19	Head: shape in longitudinal section	1.58	0.92	0.62
22	Head: intensity of color of wrapper leaf	1.76	1.08	0.71
23	Head: blistering of wrapper leaf	1.91	1.77	1.24
25	Head: firmness (at harvest maturity)	1.65	1.22	0.86
26	Head: length of internal stem	1.64	1.41	1.01
(G) (*) 27	Time of head formation	1.69	1.35	0.96
28	Time of bolting	2.00	2.50	1.77

[End of Annex and of document]