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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**

GENEVA

**TECHNICAL WORKING PARTY  
FOR  
AGRICULTURAL CROPS**

**Thirty-Second Session  
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EXAMPLERICE VARIETIES FOR EAST ASIA

*Document prepared by experts from Japan*

Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tablă de caractere

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
1. (+)	10 VS	<b>Coleoptile: color</b>					
		colorless				Milyang46	1
		green					2
		purple					3
2.	40 VS	<b>Basal leaf: sheath color</b>					
		green				Chuan7, Milyang46	1
		green with purple lines				Magunheke38kuh	2
		light purple					3
3.	40 VG	<b>Leaf: intensity of green color</b>					
		(a) light		Manyomochi		Baldo, Lemont	3
		medium		Nipponbare	Hwaseong	Bahia, Chuan7	5
		dark		Kitanomurasaki	Joryoung	Arborio, Puntal	7
4.	40 VG	<b>Leaf: anthocyanin coloration</b>					
		(a) absent		Kitanomurasaki		Bahia, Thaibonnet, Chuan7	1
		present		Asamurasaki			9
5.	40 VG	<b>Leaf: distribution of anthocyanin coloration</b>					
		(a) on tip only					1
		on margin only		Asamurasaki	Hwaseong		2
		in blotches only			Heuknam		3
		uniform				4	

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
6.	40 VG	<b>Leafsheath: anthocyanin coloration</b>	(a) absent	Kitanomurasaki	Heuknam	Chuan7	1
			present	Asamurasaki	Hwaseong		9
7.	40 VG	<b>Leafsheath: intensity of anthocyanin coloration</b>	(a) veryweak				1
			weak		Heuknam		3
			medium				5
			strong				7
			verystrong				9
8.	40 VS	<b>Leafblade: pubescence of surface</b>	(a) absent or veryweak	Kitanomurasaki	Milyang20	Thaibonnet	1
			weak	Tsukushiakamochi		Bahia, Senia , Magunheke38kuh	3
			medium	Nipponbare	Hwaseong	Titan10	5
			strong				7
			verystrong			Chuan7	9
9. (* )	40 VS	<b>Leaf: anthocyanin coloration of auricles</b>	(a) absent		Hwaseong	Balilla, Senia, Chuan7	1
			present		Heuknam	Arborio, VialoneNano	9
10.	40 VS	<b>Leaf: anthocyanin coloration of collar</b>	(a) absent			Chuan7	1
			present				9

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
11. (+)	40 VS	<b>Leaf: shape of ligule</b>					
		(a) truncate					1
		acute					2
		cleft				Chuan7	3
12.	40 VS	<b>Leaf: color of ligule</b>					
		(a) colorless		Kitanomurasaki		Chuan7	1
		green					2
		green with purple lines		Beniroman			3
		light purple		Hitomebore			4
		purple		Asamurasaki		5	
13.	40 MS	<b>Leaf blade: length</b>					
		(a) short				Fanga	3
		medium				Galaxto	5
		long			Puntal, Chuan7	7	
14.	40 MS	<b>Leaf blade: width</b>					
		(a) narrow					3
		medium				Chuan7	5
		broad				7	
15. (* (+)	60 VG	<b>Flag leaf: attitude of blade (early observation)</b>					
		erect		Kitanomurasaki	Dasan	Chuan7, Milyang46	1
		semi-erect		Nipponbare	Hwaseong		3
		horizontal		Asamurasaki	Heuknam	Magunheke38kuh	5
		recurved				7	

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota	
16. (* (+)	90 VG	<b>Flag leaf: attitude of blade (late observation)</b>						
			erect			Dasan	1	
			semi-erect			Hwaseong	3	
			horizontal		Nipponbare		5	
		recurved			Daerip1	7		
17. (+)	40 VS	<b><u>Prostrate varieties only</u>: Culm: kneeling ability</b>						
			absent				1	
		present				9		
18. (+)	40 VS	<b>Culm: attitude</b>						
			erect				Chuan7	1
			semi-erect			Nongan		3
			open			Hwaseong		5
			spreading			Dasan		7
		prostrate				9		
19. (* (+)	55 VG	<b>Time of heading (50% of plants with heads)</b>						
			very early		Tosapica, Yumekogane, Nagoriyuki	Jinbuolbyeo	Loto	1
			early		Kirara397, Nipponbare(W -W)	Odae	Albada, Cripto	3
			medium		Dontokoi, Hoshinishiki	Hwaseong	Ariete, Bahia	5
			late		Awaminori, Yumetoiro, Nipponbare(W -H)	Tamjin	Bomba, Puntal	7
		very late		Hoshiyutaka		Gulfmont	9	

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
<b>20.</b>		<b>Male sterility</b>					
(+)		absent				Chuan7	1
		partial male sterile					
		male sterile				Zhenshan97A	9
<b>21.</b>	<b>65. VS</b>	<b>Lemma: anthocyanin coloration of keel (early observation)</b>					
(+)		absent or very weak			Hwaseong	Ariete, Balilla	1
		weak					3
		medium				Chuan7	5
		strong			Heuknam	Arborio, Carnaroli	7
		very strong					9
<b>22.</b>	<b>65. VS</b>	<b>Lemma: anthocyanin coloration of area below apex (early observation)</b>					
(+)		absent or very weak				Ariete, Balilla	1
		weak					3
		medium				Chuan7	5
		strong				Arborio, Carnaroli	7
		very strong					9

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
23. (* (+)	65. VS	<b>Lemma: anthocyanin coloration of apex (early observation)</b>					
		absent or very weak			Hwaseong	Ariete, Bomba	1
		weak			Hwaseonchal	Thaibonnet	3
		medium				Cripto	5
		strong			Hiuknam	Elio, Puntal	7
		very strong			Arborio	9	
24. (* (+)	65. VS	<b>Spikelet: color of stigma</b>					
		white			Hwaseong	Ariete, Bahia, Chuan7	1
		light green					2
		yellow				Lido	3
		light purple				Thaibonnet	4
		purple			Vialone Nano	5	
25. (* (+)	70. VS	<b>Stem: thickness</b>					
		thin				Lido	3
		medium		Nipponbare	Hwaseong	Naldo, Senia	5
		thick		Mohretsu	Dasan	Arborio, Roncolo	7

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota	
26. (* )	70 VS	<b>Stem: length (excluding panicle; excluding postrate varieties)</b>	very short			Lampo, Leda	1	
			short		Yumekogane, Milky Princess	Ilpum	Loto, Thaibonnet	3
			medium		Tosapica, Nagoriyuki, Nipponbare	Hwaseong	Ariete, Bahia	5
			long		Hoshiyutaka, Kusahonami		Arborio, Baldo, Chuan7	7
			very long				Carnaroli	9
27. (* )	70 VS	<b>Stem: anthocyanin coloration of nodes</b>	absent		Hwaseong	Ariete, Senia, Thaibonnet, Chuan7	1	
			present			Arborio, Vialone Nano	9	
28.	70 VS	<b>Stem: intensity of anthocyanin coloration of nodes</b>	weak				3	
			medium				5	
			strong			Heuknam	Vialone Nano	7
29.	70 VS	<b>Stem: anthocyanin coloration of internodes</b>	absent			Ariete, Chuan7	1	
			present			Arborio, Vialone Nano	9	



Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota	
30. (* (+)	72-90 MS	<b>Panicle: length of main axis</b>						
		very short					1	
		short		Asamurasaki			Ariete, Lido, Magunheke38kuh	3
		medium		Nipponbare	Hwaseong		Thaibonnet, Thainato, Chuan7	5
		long		Mohretsu	Dasan		Carnaroli, Lemont	7
		very long					9	
31. (+)	70.	<b>Panicle: number per plant</b>						
		few		Mohretsu	Nongan		3	
		medium		Nipponbare	Hwaseong		5	
		many		Tsukushiakamochi	Dasan		7	
32.	60.	<b>Panicle: awns</b>						
		absent		Mohretsu	Nonganbyeon	Chuan7	1	
		present		Nipponbare	Nongbaek	Magunheke38kuh	9	
33.	60 VS	<b>Panicle: color of awns (early observation)</b>						
		yellowish white		Nagano-mochi Nipponbare			1	
		yellowish brown					2	
		brown		Kagura-mochi			3	
		reddish brown					4	
		light red		Mangetsu-mochi			5	
		red					6	
		light purple					7	
		purple		Norin21			Magunheke38kuh	8
		black				9		

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
34. (* )	70-80	<b>Panicle: distribution of awns</b>					
		tip only			Ilpum		1
		upper half only				Arborio, Selenio	3
		whole length			Damageum	Carnaroli, Magunheke38kuh	5
35.	70-80	<b>Panicle: length of longest awns</b>					
		very short		Hinohikari		Balilla, Calca, Thaibonnet	1
		short		Asamurasaki, Nipponbare(W -E)		Arborio, Loto, Senia	3
		medium		Nipponbare(W -H)		Bomba, Selenio	5
		long		Tsukushiakamochi		Ribe	7
		very long				Carnaroli, Magunheke38kuh	9
36. (* )	60-80 VS	<b>Spikelet: density of pubescence of lemma</b>					
		absent or very weak				Puntal, Thaibonnet	1
		weak				Guadamar, Thaibonnet	3
		medium		Kitanomurasaki		Galatxo, Vialone Nano, Chuan7	5
		strong				Calca, Bomba, S. Andrea	7
		very strong				Magunheke38kuh	9

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota	
37. (+)	80-90	<b>Spikelet: color of tip of lemma</b>		Hitomebore			1	
			white		Nipponbare		Senia	2
			yellowish		Beniroman		Lemont, Arborio, Magunheke38kuh	3
			brown		Mohretsu		Chuan7	4
			red		Manyomochi		Thaibonnet, VialoneNano	5
			purple					6
			black					
38.	90 VS	<b>Panicle: color of awns (late observation)</b>		Nipponbare		Nipponbare, Hitomebore	1	
			yellowishwhite		Kitanomurasaki		Kitanomurasaki	2
			yellowishbrown		Tatsukomochi		Tatsukomochi	3
			brown		Nagano-mochi Beniroman		Beniroman	4
			reddishbrown					5
			lightred					6
			red		Manyomochi		Manyomochi	7
			lightpurple		Asamurasaki		Asamurasaki, Magunheke38kuh	8
			purple					9
black								

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
39. (* (+)	90 VG	<b>Panicle:curvature ofmainaxis</b>					
		straight				Elio,Roncolo	1
		semi-straight				Ariete,Lido	3
		drooping			Hwaseong	Guadamar, Thaibonnet	5
		deflexed			Galatxo, VialoneNano , Chuan 7	7	
40. (+)	90	<b>Panicle:presenceof secondary branching</b>					
		absent					1
		present				Chuan7,Magunheke 38kuh	9
41. (+)	90	<b>Panicle:typeof secondary branching</b>					
		weak				Chuan7	1
		strong				Magunheke38kuh	2
		clustering					3
42. (* (+)	90	<b>Panicle:attitudeof branches</b>					
		erect					1
		erecttosemi -erect		Hitomebore, Nipponbare		Bahia	3
		semi-erect				Ariete,Lido	5
		semi-erectto spreading				Arborio,Thinato	7
		spreading			Koral	9	

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
43. (+)	90 VG	<b>Panicle: exertion</b>					
		well exerted				Senia, Vialone Nano	1
		moderately-well exerted				Chuan7, Milyang46	3
		exerted				Arborio, Mareny, Magunheke38kuh	5
		partly exerted				Lampo, Puntal	7
		enclosed					9
44.	90 VG	<b>Time of maturity</b>					
		very early				Loto	1
		early		Nipponbare(W -W)		Cripto, Lido	3
		intermediate				Ariete, Bahia	5
		late		Nipponbare(C -S)		Bahia, Roma,	7
		very late				Skybonnet, Thaibonnet	9
45. (+)	92 VG	<b>Leaf: senescence</b>					
		early					3
		intermediate					5
		late					7

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
<b>46.</b>		<b>Lemma: color</b>					
		straw				Milyang46	1
		straw with gold furrows					2
		gold					3
		brown furrow on straw					4
		brown (tawny)					5
		reddish to light purple					6
		purple spots on straw					7
		purple furrow on straw					8
		purple					9
		black					10
<b>47.</b>	<b>92 VS</b>	<b>Lemma: anthocyanin coloration of keel (late observation)</b>					
(+)		absent or very weak					1
		weak					3
		medium					5
		strong					7
		very strong					9

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
48. (+)	92. VS	<b>Lemma:</b> anthocyanin coloration of area below apex (late observation)	absent or very weak				1
			weak				3
			medium				5
			strong				7
			very strong				9
49. (* (+)	92 VS	<b>Lemma:</b> anthocyanin coloration of apex (late observation)	absent or very weak				1
			weak				3
			medium				5
			strong				7
			very strong				9
50. (* (+)	92 MS	<b>Sterile lemma:</b> length	short			Chuan7	3
			medium			Milyang46	5
			long				7

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
51. (* )	92 MS	<b>Sterile lemma: color</b>					
		straw		Hitomebore		Chuan7	1
		gold		Kaguyamochi			2
		red					3
		purple		Tsukushiakamochi		Magunheke38kuh	4
52.	92 MS	<b>Grain: weight of 1000 fully developed grains</b>					
		very low		Kitanomurasaki		Chuan7	1
		low		Tsukushiakamochi		Gulfmont, Miara	3
		medium		Kaguyamochi	Hwaseong	Ariete, Thaibonnet	5
		high				Bahia, Roma	7
		very high			Arborio	9	
53.	92 MS	<b>Grain: length</b>					
		very short					1
		short				Balilla, Bomba, Chuan7	3
		medium				Albada, Lido, Tebre	5
		long				Arborio, Thaibonnet	7
		very long			Carinam	9	
54.	92. MS	<b>Grain: width</b>					
		very narrow					1
		narrow				Thaibonnet	3
		medium				Thaiparla, Veta	5
		broad				Arborio	7
		very broad				9	



Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
55. (+)	92	<b>Grain: phenol reaction of lemma</b>	absent	Koshihikari			1
			present	Asominori			9
56. (+)	92 VS	<b><u>Varieties with phenol reaction of lemma present only</u> : Grain: coloration with phenol</b>	light				3
			medium				5
			dark				7
57. (* )	92 MS	<b>Decorticated grain: length</b>	very short			Chuan7	1
			short			Balilla, Bomba	3
			medium			Bahia, Lido	5
			long			Puntal, Thaibonnet	7
			very long				9
58.	92 MS	<b>Decorticated grain: width</b>	narrow			Lido, Thaibonnet , Chuan7	3
			medium			Thainato	5
			broad			Arborio, Bomba, Senia	7

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
59. (* (+)	92	<b>Decorticated grain: shape (in lateral view)</b>					
		round		Otomemochi		Nourrin33, Otome-Mochi	1
		semi-round		Koshihikari		Bahia, Koshihikari	2
		half spindle -shaped		Nipponbare		Habataki, Lido	3
		spindle-shaped				Ariete, Sarry -Queen	4
		long spindle -shaped		Mohretsu		Thaibonnet	5
60. (* (+)	92	<b>Decorticated grain: color</b>					
		white		Mohretsu		Bahia, Senia, Mochiminori, Chuan 7	1
		light brown		Koshihikari	Hwaseong, Ilpum	Koshihikari	2
		variegated brown		Beniroman			3
		dark brown			Jeogjinju	Venere	4
		light red					5
		red		Tsukushiakamochi		Tsukushiakamochi, Magunheke38 kuh	6
		variegated purple					7
purple			Heuknam		8		
		dark purple/black	Asamurasaki	Heugjinju	Asamurasaki	9	
61. (+)	92	<b>Endosperm: type</b>					
		glutinous		Akanemochi		Akanemochi	1
		intermediate		MilkyQueen		MilkyQueen	2
		non-glutinous		Koshihikari		Koshihikari	3

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
62. (+)	92	<b>Endosperm: content of amylose</b>	less than 5%				1
			5 – 10%		Milkyqueen	Baegjinju	2
			11 – 15%			Manmi	3
			16 – 20%		Koshihikari	Ilpum	4
			21 – 25%		Nipponbare		5
			26 – 30%		Mohretsu	Goami	6
			more than 30%		Yumetoiro	Goami2	7
63. (+)	90	<b><u>Varieties with endosperm of amylose absent only</u></b> <b>Polished grain: white core in endosperm</b>	less than 5%		Hwaseong	Guadamar, Thaibonnet	1
			5 – 10%			Balilla, Thinato	2
			11 – 20%			Carnaroli, Senia	3
			21 – 40%			S. Andrea	4
			over 40%			Vialone Nano	5
64. (+)	90	<b><u>Varieties with endosperm of amylose absent only</u></b> <b>Decorticated grain: white belly in endosperm</b>	less than 5%		Hwaseong		1
			5 – 10 %				2
			11 – 20%				3
			21 – 40%				4
			more than 40%				5

Char. No.	Method of Examination	English	Example varieties Europe	Example varieties Japan	Example Varieties Korea	Example Varieties China and Original ones	Note/Nota
<b>65.</b>	<b>92</b>	<b>Alkali digestion</b>					
(+)		not digested					1
		low digested		Akenohoshi			3
		intermediate					5
		completely digested		Nipponbare			7
<b>66.</b>	<b>92</b>	<b>Decorticated grain: aroma</b>					
(*)		absent		Hitomebore		Bahia, Thabonnet, Chuan7	1
		present		Sariqueen, Kitanomurasaki		Arome, Gange, Urumati	9

Regional variation of franking is shown here using Nipponbare as the example variety in Japan.

C -S: Cool region-South (data from Hokuriku Agri. Expt. Station, Joetsu city)

W -H: Warm region -Hilly area (data from Aichi Pref. Agr. Expt. Station, Inahashi town)

W -W: Warm region -West (data from Chugoku Agr. Expt. Station, Fukuyama city)

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