

Table 2. List of descriptors for Rice

Des. #	Descriptor	Descriptor state	Recording stage	Remarks
1	Accession number			
2	Variety group	1 indica		
		2 japonica		
		3 javanica		
		4 Intermediates (hybrids)		
3	Auricle colour	1 Light green	Late vegetative	
		2 Light purple		
		3 Purple		
4	Awn colour	0 Awnless	After anthesis	
		1 Straw		
		2 Gold		
		3 Brown		
		4 Red		
		5 Purple		
5	Awning	0 Absent	Flowering to maturity	
		1 Short and partly awned		
		5 Short and fully awned		
		7 Long and partly awned		
		9 Long and fully awned		
6	Basal leaf sheath colour	1 Green	Late vegetative	
		2 Purple lines		
		3 Light purple		
		4 Purple		
7	Collar colour	1 Light green	Late vegetative	
		2 Green		
		3 Purple		
8	Culm angle	1 Erect (<30°)	At flowering	
		3 Intermediate (~45°)		
		5 Open (~60°)		
		7 Spreading (>60°)		
		9 Procumbent		
9	Culm internode colour	1 Green	Near maturity	
		2 Light gold		
		3 Purple lines		
		4 Purple		
10	Culm length (cm)	from soil surface to panicle	After flowering to maturity	
11	Culm number	Tiller number with panicles	After anthesis to near maturity	
12	Diameter of basal internode	Outer diameter of main culm base	At late reproductive stage	
13	Flag leaf angle	1 Erect	At anthesis	
		3 Intermediate		
		5 Horizontal		
		7 Descending		
14	Grain width	Width in mm at widest part of	At maturity	
15	Leaf angle	Note on leaf below the flag leaf	Late vegetative	
		1 Erect		
		5 Horizontal		
16	Leaf blade colour	9 Droopy		
		1 Light green	Late vegetative	
		2 Green		
		3 Dark green		

		4 Purple tips		
		5 Purple margins		
		6 Purple mixed with green		
		7 Purple blotch		
		8 Purple		
17	Leaf blade pubescence	1 Glabrous	Late vegetative	
		2 Intermediate		
		3 Pubescent		
18	Leaf length	Data in cm on leaf just below the flag leaf	Early flowering	
19	Leaf width	Data in cm on widest portion of leaf just below the flag leaf	Early flowering	
20	Lemma and palea colour	0 Straw	After anthesis to hard dough stage	
		1 Gold furrows on straw		
		2 Brown spots on straw		
		3 Brown furrows on straw		
		4 Brown		
		5 Reddish to light purple		
		6 Purple spots on straw		
		7 Purple furrows on straw		
		8 Purple		
		9 Black		
		10 White		
21	Lemma and palea pubescence	1 Glabrous	Near maturity	
		2 Hairs on lemma keel		
		3 Hairs on upper portion		
		4 short hairs		
		5 Long hairs		
22	Ligule colour	1 White	Late vegetative	
		2 Purple lines		
		3 Purple		
23	Ligule length	Data in mm from base of the collar to the tip	After anthesis	
24	Ligule shape	1 Acute	Late vegetative	
		2 Cleft		
		3 Truncate		
25	Panicle axis	1 Straight	Near maturity	
		2 Droopy		
26	Panicle length	Data in cm from panicle base to	Near maturity	
27	Panicle type	1 Compact	Near maturity	
		2 Intermediate		
		3 Open		
28	Secondary branching of panicle	0 Absent	Near maturity	
		1 Light		
		2 Heavy		
		3 Clustered		
29	Seedling height	Data in cm from the base of the shoot to the tip of tallest leaf	At 5-leaf stage	
30	Sterile lemma colour	1 Straw	At maturity	
		2 Gold		
		3 Red		
		4 Purple		
31	Sterile lemma length (mm)	Data on each of the two sterile lemmas	After harvest	

		0 Absent		
		1 Short (≤ 1.5 mm)		
		3 Medium (1.6-2.5 mm)		
		5 > 2.5 mm but shorter than the lemma		
		7 Equal or longer than the		
		9 Asymmetrical		
32	Stigma colour	Recording between 9 am to 2 pm with aid of hand lens	At anthesis	
		1 White		
		2 Light green		
		3 Yellow		
		4 Light purple		
		5 Purple		
33	Maturity	No. of days from seeding to 85% of the grains are ripened		
34	Panicle exertion	1 Well exerted	Near maturity	
		3 Moderately well exerted		
		5 Just exerted		
		7 Partly exerted		
		9 Enclosed		
35	Panicle threshability	1 Difficult	At maturity	
		3 Moderately difficult		
		5 Intermediate		
		7 Loose		
		9 Easy		
36	Plant height (cm)	From soil surface to tip of the tallest panicle, awns excluded	Near maturity	
37	Tillering ability	1 > 25 tillers	After anthesis to near maturity	
		3 Tiller number 20-25		
		5 Tiller number 10-19		
		7 Low (5-9 tillers)		
		9 Very low (< 5 tillers)		
38	Grain yield	Record from a 5 m ² plot, border excluded, report in kg ha ⁻¹ basis	at 13% moisture content of the grain	
39	Stress-Soil salinity	Susceptibility scored on 1-9 scale, where	Growth stage 3-4*	Codes for growth stages are given in the end
		1 Plant growth near normal		
		3 Some reduction in tillering, some leaves discoloured		
		5 Growth and tillering reduced, leaves discoloured		
		7 Growth ceases, some plants		
		9 Almost all plants dead		
40	Stress-Iron toxicity	Susceptibility scored on 1-9 scale, where	Growth stage 2-5	
		0 Growth and tillering normal		
		1 Reddish-brown spots or discolouration on tips of older		
		3 Growth and tillering normal, older leaves turn brown, purple or orange-yellow		
		5 Growth retarded, leaves discolored		

		7 Growth ceases, most leaves		
		9 Most plants dead		
41	Stress-Cold	Susceptibility scored 1-9 scale, where	Growth stage 1; 4-9	
		1 Normal plants		
		3 Growth slightly retarded		
		5 Growth moderately retarded, leaves turn yellowish		
		7 Growth severely retarded, leaves yellow and panicles		
		9 Growth severely retarded, panicle not exerted		
42	Stress-Heat	Heat damage recorded on fertility of spike, where		
		1 > 80% fertility		
		3 Fertility range from 61-80%		
		5 Fertility range from 41-60%		
		7 Fertility range from 11-40%		
		9 Fertility <11%		
43	Virus-Rice grassy stunt	1 No symptoms seen	Growth 4-6	
		3 Pale green and slightly narrow leaves		
		5 Pale green and narrow leaves		
		7 Pale green and narrow leaves with rust spots		
		9 More than 30% height reduction, several small tillers		
44	Virus-Rice Tungro	1 No symptoms seen	Growth stage 3-5	
		3 Height reduction by 1-10%		
		5 Height reduction 11-30%		
		7 Height reduction 31-50%, with yellow to orange leaf		
		9 Height reduction >50%, leaves discoloured		
45	Bacterial leaf streak (<i>Xanthomonas oryzae</i> pv. <i>Oryzicola</i>)	0 No lesions seen	Growth stage 3-6	
		1 Small brown specks of pin point size		
		3 Large number of lesions on upper leaves		
		5 Lesions affecting 4-10% of the leaf area		
		7 Lesions affecting 10-50% of the leaf area		
		9 More than 75% of leaf area affected		
46	Leaf blast (<i>Pyricularia grisea</i>)	0 No lesions seen	Growth stage 2-3	
		1 Small brown specks of pin point size		
		2 Small roundish to slightly elongated necrotic gray spots		
		3 Large number of lesions on upper leaves		
		4 Lesions 3 mm size, <4% of leaf area affected		
		5 Leaf area affected 4-10%		

		6 Leaf area affected 11-25%		
		7 Leaf area affected 26-50%		
		8 Leaf area affected 51-75%		
		9 More than 75% of leaf area affected		
47	Panicle blast (<i>Pyricularia Oryzae</i>)	0 Few lesions only on pedicels		
		1 Lesions on several pedicels and secondary branches		
		3 Lesions seen on primary branches or middle of panicle		
		5 Lesions partly around the base or lower part of the panicle axis		
		7 Lesions completely around panicle base or panicle axis near base also on 30% of the filled		
		9 Lesions completely around and on >30% of filled grains		
48	Insect-Brown Plant hopper (<i>Nilaparvata lugens</i>)	0 No damage	Growth stage 3-9	
		1 Slight yellowing of few plants		
		3 Leaves partially yellow		
		5 Leaves yellow, some stunting		
		7 More than half of plants wilting or with hopperburn		
		9 All plants dead		
49	Insect-Gall midge (<i>Orselia oryzae</i>)	0 No damage	Growth stage 2-5	
		1 Less than 1% damage		
		3 Damage 1-5%		
		5 Damage 6-10%		
		7 Damage 11-25%		
		9 Damage >25%		
50	Insect-Leaf folder (<i>Cnaphalocrosis medinalis</i>)	0 No damage	Growth stage 3-9	
		1 Damage 1-10%		
		3 Damage 11-20%		
		5 Damage 21-35%		
		7 Damage 36-50%		
		9 Damage >50%		
51	Stem borers (<i>Chilo polychysus</i> , <i>Chilo auricilius</i> , <i>Sesamia inferens</i> , <i>Chilo suppressalis</i> , <i>Scirpophaga incertula</i> ;	Cause deadhearts as well whitehead and both scored separately on 1-9 scales	Growth stage 3-9	
52	Stress-Deep water	Elongation in deepwater recorded on 1-9 scale, 1=best elongation and 9=poorest		
53	Stress-Submergence	Scored % comparative survival on 1-9 scale		
54	Stress-Drought	Damage scored at vegetative stage or as affect on spikelet fertility, both on 1-9 scale		
Growth cycle traits				

55	Effective seeding date		Date when seeds were first moistened; this is the date of soaking for pre-soaked seed, or the date of sowing for dry seed sown onto a wet seedbed, or the date when rain or other moisture becomes available to seed sown dry	
56	First Heading		Date on which the first flush of flowers is observed. It is specified either as the number of days from effective seeding date to first heading date or as the date of effective seeding	
57	Heading		Date on which 80% of the plants are heading. It is specified either as the number of days from effective seeding date to main heading date or as effective seeding date and main heading date	
58	Days to Maturity		Maturity is the date on which 80% of the grains on the panicles are fully ripened.	
59	Life cycle	1 Annual	The completeness of plant growth in a growing season. Stage: after ratooning.	
		2 Perennial		
		3 Intermediate		
Vegetative data				
60	Coleoptile: anthocyanin colouration	0 Absent	Observed in 6-7-day-old seedlings	
		1 Very weak		
		3 Weak		
		5 Medium		
		7 Strong		
61	Leaf sheath: anthocyanin colouration	0 Absent	Presence and intensity of anthocyanin colouration on the outer surface of the sheath on the penultimate leaf. Stage: late vegetative	
		3 Weak		
		5 Medium		
		7 Strong		
62	Leaf blade: presence/absence of anthocyanin colouration	0 Absent	Stage: late vegetative	
		1 Present		
63	Leaf blade: distribution of anthocyanin colouration	1 On tips Only	Stage: late vegetative	
		2 On margins only		
		3 In blotches		
		4 Even (uniform purple)		
64	Leaf margin: pubescence	1 Glabrous (no Hairs)	Assess pubescence of leaf margins. Stage: late vegetative	
		2 Hairy or ciliated		
65	Ligule margin shape	1 Entire	Stage: after anthesis	
		2 Scalloped or toothed		
		99 Other (specify in descriptor 7.6, Notes)		
66	Ligule margin hairiness	0 Absent		
		1 Present		
67	Ligule pubescence	1 Glabrous	Visual assessment using hand lens. Stage: after anthesis	
		2 Partially hirsute: hairs covering less than 50% of the		
		3 Mostly or generally hirsute: hairs covering more than		

68	Flag leaf : length (cm)		Measure length of the flag leaf, from the ligule to the top of the blade, on five representative plants. Calculate average to nearest cm. Stage: 7 days after anthesis	
69	Flag leaf : width (cm)		Measure width at the widest portion of the flag leaf on five representative plants. Calculate average to nearest cm. Stage: 7 days after	
70	Culm: Kneeing ability	0 Absent	Prostrate cultivars only (i.e. with Culm habit = 9). Measured after flowering in conditions where culms have fallen flat due to receding water flow. The stems of cultivars with kneeling ability start to grow upright with 3 to 4 nodes	
		1 Present		
71	Culm: anthocyanin colouration	0 Absent	The presence and distribution of purple colour from anthocyanin, observed on the outer surface of the nodes on th culm. Stage: after flowering to near maturity	
		1 Purple		
		2 Light purple		
		3 Purple lines		
72	Culm: underlying node colour	0 No underlying colour visible due to anthocyanin	The underlying colour of the outer surface of the nodes on the culm, ignoring any anthocyanin colouration. Stage: after flowering	
		1 Light gold		
		2 Green		
73	Culm: internode anthocyanin	0 Absent	The presence and distribution of purple colour from anthocyanin, observed on the outer surface of the internodes on th culm. Stage:	
		1 Purple		
		2 Purple lines		
74	Culm: lodging resistance	1 Very weak (all plants flat)	Scored at maturity based on the observed degree of lodging	
		3 Weak (most plants nearly		
		5 Intermediate (most plants leaning about 45)		
		7 Strong (most plants leaning about 20 from vertical)		
		9 Very strong (all plants		
75	Culm: strength	1 Very weak	Assessed by gently pushing the titlers back and forth at a distance of about 30 cm from the ground. This test gives some indication of stiffness and resilience. Stage: at harvest	
		3 Weak		
		5 Intermediate		
		7 Strong		
		9 Very Strong		
76	Leaf : senescence	1 Very early (all leaves lost their green colour before grain	Estimated by observing all leaves below the flag leaf for their retention of greenness. Stage:	
		3 Early (all leaves have lost their green colour at harvest).		
		5 Intermediate (one leaf still green at harvest).		
		7 Late (two or more leaves still green at harvest).		
		9 Very late (all leaves still green at harvest).		

77	Rhizome and stolon: formation	1 Vegetative crown	Observe when plants are ready for harvest	
		2 Vegetative crown and stolon		
		3 Vegetative crown and weak rhizomes		
		4 Vegetative crown, stolon and weak rhizomes		
		5 Strong rhizomes and no		
		6 Strong rhizomes with tubers		
Reproductive traits recorded before harvest				
78	Male sterility	1 Effectively absent: <25% sterile pollen	Stage: at anthesis	
		2 Intermediate		
		3 Male sterile: >95% sterile		
79	Anther: length (mm)		(Wild species). Record the average of five samples. Stage: at anthesis	
80	Anther: colour	1 Yellow	(Wild species). Stage: at anthesis	
		2 Brown		
81	Lemma: colour of apiculus (early observation, recorded after anthesis to hard dough stage)	1 White	Stage: cultivated species after anthesis to hard dough stage (pre-ripening stage); wild species	
		2 Straw		
		3 Brown (tawny)		
		4 Green		
		5 Red		
		6 Red apex		
		7 Purple		
		8 Purple apex		
		9 Black		
82	Lemma: anthocyanin colouration of area below apiculus (early observation, recorded after anthesis to hard dough stage)	0 Absent	Stage: after anthesis to hard dough stage (pre-ripening stage)	
		1 Very weak		
		3 Weak		
		5 Medium		
		7 Strong		
83	Awns: distribution	0 None (awnless)	The presence and distribution of awns along the panicle. Stage: flowering to maturity	
		1 Tip only		
		2 Upper quarter only		
		3 Upper half only		
		4 Upper three-quarters only		
		5 Whole length		
84	Awn: length (mm)	0 None (awnless)	Record the average length of 10 representative spikelets. Cultivated species: measure of the longest awn. Stage: maturity. Wild species: measure random awns. Stage: after anthesis. Alternatively, cultivated species can be coded	
		1 Very short (<5 mm)		
		3 Short (~8 mm)		
		5 Intermediate (~15 mm)		
		7 Long (~30 mm)		
		9 Very long (>40 mm)		
85	Awns: thickness (mm)		Record the average width of 10 representative spikelets, at 1 cm from the apiculus of the spikelet. Stage: after anthesis	
86	Panicle: arrangement of primary branches	1 Whorled	Stage: after anthesis	

		2 Alternative		
87	Panicle: number of basal primary branches		Recorded from 5 panicles on wild species only. The number of primary panicle branches attached to the basal whorl of the panicle.	
88	Panicle: distance from base to lowest spikelet insertion		Record the average of five representative panicles when fully exerted.	
89	Panicle: texture of main axis	1 Scabrous	Assess by running fingers from the base towards the tip of the panicle axis. Stage: at full	
		2 Smooth		
90	Panicle: number per plant	3 Low	Record the number of panicles per plant (see descriptor 5.6, Field spacing). Stage: early ripening. Alternatively, panicle number can be coded as follows:	
		5 Intermediate		
		7 High		
91	Panicle: attitude of branches	1 Erect (compact panicle)	The compactness of the panicle, classified according to its mode of branching, angle of primary branches, and spikelet density. Stage: cultivated species, near maturity; wild species,	
		3 Semi-erect (semi-compact panicle)		
		5 Spreading (open panicle)		
		7 Horizontal		
		9 Drooping		
92	Panicle: shattering	1 Very low (<1%)	Observed as the extent to which grains have shattered from the panicle. Hold in hand with mild pressure. Stage: at maturity or harvest	
		3 Low (~3%)		
		5 Moderate (~15%)		
		7 High (~35%)		
		3 Very high (>50%)		
Traits recorded after harvest and before final processing				
93	Awn colour (late observation)	0 Absent (awnless)		
		1 Straw		
		2 Gold		
		3 Brown (tawny)		
		4 Red		
		5 Purple		
		6 Black		
94	Lemma and palea pubescence	1 Glabrous	Visual assessment of the presence and distribution of mature grains using hand lens.	
		2 Hairs on lemma keel		
		3 Hairs on upper portion		
		4 Short hairs		
		5 Long hairs (velvety)		
95	Lemma: anthocyanin colouration of keel	0 Absent		
		1 Very weak		
		3 Weak		
		5 Medium		
		7 Strong		
96	Lemma: anthocyanin colouration of area below apiculus (late observation)	0 Absent		
		1 Very weak		
		3 Weak		
		5 Medium		

		7 Strong		
97	Lemma: colour of apiculus (late observation)	1 010 White		
		2 020 Straw		
		3 052 Brown (tawny)		
		4 060 Green		
		5 070 Red		
		6 071 Red apex		
		7 080 Purple		
		8 087 Purple apex		
		9 100 Black		
98	Lemma: shape of apiculus	1 Pointed	Stage: after harvest	
		2 Curved		
99	Longer sterile lemma length (mm)	3 Short	Record the average length of the longer sterile lemma on five spikelets. May be coded as:	
		5 Medium		
		7 Long		
		9 Extra long		
100	Sterile lemma shape	0 Absent		
		1 Linear (long and slender)		
		2 Subulate or setaceous (linear and tapering to a fine point, set with or consisting of bristles)		
		3 Triangular (and very small)		
101	Spikelet fertility	1 Completely sterile (0%)	The abundance of well-developed spikelets as a percentage of the total number of spikelets on five representative panicles. May be coded as:	
		2 Highly sterile (1-49%)		
		3 Partly sterile (50-74%)		
		4 Fertile (75-90%)		
		5 Highly fertile (>90%)		
102	Grain: length (mm)		Measured as the distance from the base of the lowermost glume to the tip (apiculus) of the fertile lemma or palea, whichever is longer. On awned cultivars, measure to a point comparable to the tip of the apiculus (exclude the awn). Preferably, measure with calliper or photo-enlarger. Average of 10 representative grains.	
103	Grain: thickness (mm)		Preferably, measure with a calliper or photo-enlarger. Average of 10 representative grains. Stage: after harvest	
104	Grain: 100-grain weight (g)		Random sample of 100 well-developed, whole grains, dried to 13% moisture content. Weigh on a precision balance	
105	Grain: 10-grain weight (g)		(10-grain samples are taken because of the low seed production of wild rice). Random sample of 10 well-developed, whole grains, dried to 13% moisture content. Weigh on a precision balance. Stage: post-harvest	
106	Caryopsis: length			
107	Caryopsis: width			
108	Caryopsis: shape	1 Round		
		2 Semi-round		
		3 Half spindle-shaped		
		4 Spindle-shaped		

		5 Long spindle-shaped		
109	Caryopsis: pericarp colour	1 010 White		
		2 051 Light brown		
		3 055 Speckled brown		
		4 050 Brown		
		5 070 Red		
		6 088 Variable purple		
		7 080 Purple		
110	Endosperm types	1 Non-glutinous (non-waxy)	By visual observation, two types of endosperm of polished rice are distinguishable. In glutinous rice, which does not have amylose, the endosperm appears a waxy white. In non-glutinous rice, which contains amylose, the endosperm appears cloudy and translucent.	
		2 Intermediate		
		3 Glutinous (waxy)		
Plant descriptors for evaluation				
	Grain cooking and quality traits			
111	Lemma: phenol reaction	0 No reaction	Place hulls from 10 grains into a petri dish of 5 cm diameter, and 5 ml of 1.5% phenol solution; cover the petri dish, and keep at room temperature for 1 day. Record the reaction of	
		3 Light		
		5 Medium		
		7 Dark		
112	Caryopsis scent	0 Non-scented	From cooked kernel. Use freshly harvested grain. A molecular marker for fragrance is described in Section 12.3, Fragrance	
		1 Lightly scented		
		2 Scented		
113	Endosperm amylase content(%)	0 Waxy-glutinous (<3)	Amylose content of all cultivars of low amylose and many of intermediate amylose is sensitive to high temperatures during grain-filling. Molecular markers for classifying amylose are listed in Section 12.1, Amylose	
		1 Very low (~9)		
		3 Low (~17)		
		5 Intermediate (~20)		
		7 High (~23)		
114	Gelatinization temperature by alkali-digestion value	1 Not affected but chalky	Gelatinization temperature increases in japonica cultivars when grain-filling occurs under high temperatures. Molecular markers are described in Section 11.2 for classifying gelatinization temperature. This test is simpler but less precise than the alternative test described in Section 83.5.	
		2 Swollen		
		3 Swollen with collar incomplete and narrow		
		4 Swollen with collar complete and wide		
		5 Split or segmented with collar complete and wide		
		6 Dispersed, merging with collar		
		7 Completely dispersed and		

115	Gelatinization temperature by alkali-digestion value		Differential scanning calorimetry (DSC) measures the energy required to melt starch crystals and reports the onset temperature, peak temperature, conclusion temperature and enthalpy of gelatinization. The peak temperature provides a precise measure of gelatinization temperature. CT falls into two groups when DSC is used, with peak	
116	Gel coqсистенpy	1 81—100 mm Soft	Ground rice (01 g) is placed in a test tube with thymol blue (0.025% in ethanol, 0.2 ml) and ICON (0.2N, 2 ml). The tube is shaken to ensure contents are mixed, boiled (8 mm), rested (5 mirt) and then placed in an ice-bath (15 mm). Cooled tubes are laid flat on graph paper for 1 hour, and then the distance that the gel travels is measured. Age of the rice, degree	
		2 61—80 mm Soft		
		3 41—60 mm Intermediate		
		4 36—40 mm Hard		
		5 <36mm Hard		
117	Brown rice protein content [% DW]			
118	Lysine content [%			
119	Parboiling loss [%		Percentage of solids lost when parboiled.	
120	Elongation ratio.		Ratio of cooked rice length to milled rice	
Abiotic stress sensitivity		0 No visible sign of sensitivity		
		1 Very low or almost no visible sign of sensitivity		
		3 Low		
		5 Intermediate		
		7 High		
		9 Very high		
121	Alkali injury			
122	Phosphorus			
123	Zinc deficiency			
Biotic stress sensitivity		1 Very low or no visible sign of sensitivity		
		3 Low		
		5 Intermediate		
		7 High		
		9 Veryhigh		
Diseases				
124	<i>Cochliobolus miyabeanus</i> (Brown spot)		Brown spot	
125	<i>Sphaerulina oryzina</i> (Narrow brown leaf spot)		Narrow brown leaf spot	
126	<i>Monographella albescens</i> (Leaf		Leaf scald	
127	<i>Xanthomonas oryzae</i> pv. <i>oryzae</i>		Bacterial blight	
Diseases caused by viruses and mycoplasma-like organisms				
128	Rice ragged stunt virus (RGSV)		Rice ragged stunt disease	
129	Mycoplasma		Yellow dwarf	
130	Rice yellow mottle virus (RYMV)		Rice yellow mottle	

131	Rice hoja blanca virus (RHBV)		Rice hoja blanca	
132	<i>Thanatephorus cucumeris</i>		Sheath blight (ShB)	
133	<i>Sarocladium oryzae</i>		Sheath rot (ShR)	
134	<i>Sarocladium, Bipolaris, Alternaria</i>		Grain discolouration	
135	<i>Ustilaginoidea virens</i>		False smut (FSm)	
136	<i>Tilletia barclayana</i>		Kernel smut (KSm)	
137	<i>Balansia oryzae-sativae</i>		Udbatta disease (UDb)	
138	<i>Gibberella fujikuroi</i>		Bakanae disease	
139	<i>Magnaporthe salvinii</i>		Stem rot (SR)	
140	<i>Ditylenchus angustus</i>		Ufra (U)	
Insects				
141	<i>Sogatella furcifera</i>		Whitebacked planthopper (WBPH)	
142	<i>Tagosodes orizicolus</i> (Rice delphacid)		Rice delphacid (RDeI)	
143	<i>Cnaphalocrosis medinalis</i>		Leaf folder (LF)	
144	<i>Nymphula</i>		Caseworm (CS)	
145	<i>Hydrellia philippina</i>		Rice whorl maggot (RWM)	
146	<i>Leptocorisa</i>		Rice bug (RB)	
147	<i>Stenchaetothrips biformis</i> (Thrips)		Thrips	
148	Biochemical markers		Specify methods used and cite reference(s). Refer to <i>Descriptors for genetic markers technologies</i> , available in pdf (portable document format) from the Bioversity Web site (www.bioversity.cgiar.org) or by email request	
	Molecular markers		For general standards for molecular markers, refer to <i>Descriptors for genetic markers technologies</i> , available in pdf from the Bioversity Web site (www.bioversity.cgiar.org) or by email request to bioversity-	
149	Amylose content			
150	Gelatinization temperature			
151	Fragrance			
	Cytological			
152	Chromosome number		Determined through pollen samples taken at booting stage or from the root tip of	
153	Ploidy level		Aneuploid or structural rearrangement	

***Growth stages**

Code

- 1 Germination
- 2 Seedling
- 3 Tillering
- 4 Stem elongation
- 5 Booting
- 6 Heading
- 7 Milk stage
- 8 Dough stage
- 9 Mature grain