

Plant		Rice		428	Primary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Culm length	5 plants	Measurement	cm (integer)		Distance from ground level to the base of the longest culm
2	Panicle length	5 plants	Measurement	cm (round to the 1st decimal place)		Distance from the base to the tip of panicle on the longest culm
3	Number of panicles	5 plants	Measurement	Number per plant (round to the 1st decimal place)		Number of productive panicles at ripening stage
4	Apiculus color	Block	Observation	1:Straw 2:Tawny 3:Brown 4:Red brown 5:Light red 6:Red 7:Light purple 8:Purple 9:Blackish purple		At three weeks after heading
5	Grain length	5 grains	Measurement	mm (round to the 1st decimal place)		Using a projector or dialgauge as the distance from the base of the sterile lemma to the tip of the fertile lemma or palea
6	Grain width	5 grains	Measurement	mm (round to the 1st decimal place)		Use a projector or dialgauge to measure the maximum distance across lemma and palea
7	Brown rice length	5 grains	Measurement	mm (round to the 1st decimal place)		Use a projector or dialgauge to measure the length of brown rice
8	Brown rice width	5 grains	Measurement	mm (round to the 1st decimal place)		Use a projector or dialgauge to measure the maximum width of brown rice
9	Endosperm type	Block	Observation	2:Non-glutinous 8:Glutinous		Reaction to potassium iodide solution or visually
10	Heading date	Block	Observation	date		Heading date corresponds to the day when 50% of the plants in an accession headed
11	Lemma and palea color	Block	Observation	1:Straw 2:Yellow 3:Gold 4:Reddish yellow to orange 5:Brown 6:Reddish brown 7:Purple 8:Black 9:Other		At three weeks after heading

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12	Presence of awn	Block	Observation	0:Absent 1:Extremely scarce 2:Very scarce 3:Scarce 4:Slightly scarce 5:Intermediate 6:Slightly abundant 7:Abundant 8:Extremely abundant 9:Completely	Scarce:10%, Intermediate:25%, Abundant:40%
13	Awn length	Block	Observation	1:Very short 3:Short 5:Intermediate 7:Long 9:Very long	Short:2 cm, intermediate:4 cm, long:6 cm
14	Distribution of awns	Block	Observation	1:Tip only 3:Upper half only 5:Whole length	
15	1,000 grain weight	1,000 grains	Measurement	g (round to the 1st decimal place)	

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1	Plant type	Block	Observation	2:Super panicle weight type 3:Panicle weight type 4:Rather panicle weight type 5:Intermediate type 6:Rather panicle number type 7:Panicle number type 8:Super panicle number type		
2	Culm thickness	Block	Observation	2:Very thin 3:Thin 4:Slightly thin 5:Intermediate 6:Slightly thick 7:Thick 8:Very thick		At ripening stage
3	Culm hardness	Block	Observation	2:Very hard 3:Hard 4:Slightly hard 5:Intermediate 6:Slightly soft 7:Soft 8:Very soft		At ripening stage
4	Leaf blade pubescence	Block	Observation	0:Glabrous 1:Very scarce 2:Scarce 3:Little 4:Slightly little 5:Intermediate 6:Slightly abundant 7:Abundant 8:Very abundant 9:Extremely abundant		At tillering stage
5	Flag leaf angle	Block	Observation	2:Erect 3:Semi-erect 4:Slightly semi-erect 5:Intermediate 6:Slightly descending 7:Semi-descending 8:Descending		At dough-ripening stage
6	Leaf blade color	Block	Observation	1:Yellow 2:Yellowish blotched 3:Light green 4:Green 5:Dark green 6:Purple blotched 7:Purple margin 8:Purple 9:Other		At tillering stage
7	Basal leaf sheath color	Block	Observation	1:Yellow 2:Yellowish blotched 3:Light green 4:Green 5:Dark green 6:Purple blotched 7:Purple margin 8:Purple 9:Other		At tillering stage
8	Spikelet density	5 plants	Measurement	(round to the 1st decimal place)		Number of spikelets per 10 cm of panicle axis using a panicle on the longest culm
9	Panicle exertion	Block	Observation	2:Very short 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long 8:Very long		The distance from the top of the flag leaf sheath to the panicle base
10	Panicle type	Block	Observation	1:Lanceolate 3:Spindle 5:Clavated 7:Broom 9:Open		Based on the type of branching, angle of primary branches and spikelet density

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11	Pubescence of lemma and palea	Block	Observation	0:None 1:Rare 2:Scarce 3:Little 4:Slightly little 5:Intermediate 6:Slightly abundant 7:Abundant 8:Very abundant 9:Extremely abundant		
12	Sterile lemma color	Block	Observation	1:Straw 2:Gold 3:Red 4:Purple		At ripening stage
13	Phenol color reaction	5 grains	Observation	0:Negative 9:Positive		Dip grains into 1.5% phenol solution for 6 hours and dry slowly
14	Awn color	Block	Observation	1:Straw 2:Yellowish brown 3:Brown 4:Reddish brown 5:Light red 6:Red 7:Light purple 8:Purple 9:Blackish purple		At ripening stage
15	Seed coat color	Block	Observation	1:White 2:Light brown 3:Variegated brown 4:Dark brown 5:Light red 6:Red 7:Variegated purple 8:Purple 9:Dark Purple/black		
16	Hue of brown rice	Block	Observation	2:Very light 3:Light 4:Slightly light 5:Intermediate 6:Slightly dark 7:Dark 8:Very dark		
17	Maturity date	Block	Observation	date		The date when more than 90% of grains on panicles become ripe
18	Days from the first heading to the full heading	Block	Calculation	Days (integer)		Number of days calculated by subtracting the date of head emergence from the date of full heading

Plant		Rice		428	Secondary essential character	
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1	Estimated genotype for blast resistance	Block	Measurement			Judging from the reaction pattern of rice seedlings to blast races. The genotypes of the resistance are estimated.
2	Field resistance to leaf blast	Block	Obs.&Measr.	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		
3	Varietal group of bacterial blight resistance	Block	Measurement	1:Kinmaze group 2:Kogyoku group 3:Rantai Emas group 4:Wase Aikoku group 5:Jawa 14 group		
4	Field resistance to bacterial blight	Block	Obs.&Measr.	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		
5	Resistance to stripe	Block	Obs.&Measr.	1:High 9:Low		
6	Resistance to green rice leafhoppers	Block	Obs.&Measr.	1:High 9:Low		
7	Resistance to brown planthoppers	Block	Obs.&Measr.	1:High 9:Low		
8	Drought resistance	Block	Obs.&Measr.	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		By field test at seedling stage under drought condition
9	Damaged type cold tolerance	Block	Measurement	0:Super high 1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		By low temperature treatment at panicle development stage
10	Delayed type cold tolerance	Block	Measurement	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		
11	Lodging tolerance	Block	Observation	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		Judging from the lodging score by the time and the degree of occurrence

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12	Viviparity	3 panicles	Measurement	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low	Using panicles of 35 days after heading stage

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1	Resistance to Helminthosporium leaf spot	Block	Observation	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		
2	Resistance to dwarf	Block	Observation	1:High 9:Very low		
3	Resistance to rice waika virus	Block	Observation	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		
4	Resistance to sheath blight	Block	Observation	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		
5	Resistance to rice stem maggots	Block	Observation	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		
6	Resistance to rice water weevils	Block	Observation	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		
7	Salinity tolerance	Block	Observation	3:High 5:Intermediate 7:Low		
8	Low temperature germinability	Block	Measurement	1:Very high 3:High 4:Slightly high 5:Intermediate 6:Slightly low 7:Low 9:Very low		Germination percentage of seeds at 12 centi degrees for 10 days. High:70%, intermediate:50%, low:30%

Plant		Rice		428	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Yield	Block	Measurement	kg/a (round to the 1st decimal place)		Brown rice weight
2	Panicle threshability	Block	Observation	2:Very hard 3:Hard 4:Slightly hard 5:Intermediate 6:Slightly easy 7:Easy 8:Very easy		At ripening stage
3	Grain appearance	Block	Observation	1:Extremely bad 2:Very bad 3:Bad 4:Slightly bad 5:Intermediate 6:Slightly good 7:Good 8:Very good 9:Excellent		
4	Grain luster	Block	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		
5	Amount of white belly grains	Block	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		
6	Amount of cracked grains	Block	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		
7	Eating quality	Block	Measurement	1:Excellent 2:Very good 3:Good 4:Slightly good 5:Intermediate 6:Slightly bad 7:Bad 8:Very bad 9:Extremely bad		

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No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Top dry weight	Block	Measurement	kg/a (round to the 1st decimal place)	At ripening stage
2	Amount of white core in grains	Block	Observation	2:Extremely few 3:Very few 4:Few 5:Intermediate 6:Some 7:Many 8:Very many	
3	Size of white core in grains	Block	Observation	2:Very small 3:Small 4:Somewhat small 5:Intermediate 6:Somewhat large 7:Large 8:Very large	
4	Amylose content in endosperm		Measurement	% (round to the 1st decimal place)	
5	Protein content in endosperm		Measurement	% (round to the 1st decimal place)	
6	Presence or absence of lipoxygenase-3 in grain		Measurement	2:Absent 8:Present	
7	Gelatinization property		Measurement		
8	Content of K, P, Mg, Ca, Na, Zn, Fe and Cu in endosperm		Measurement		