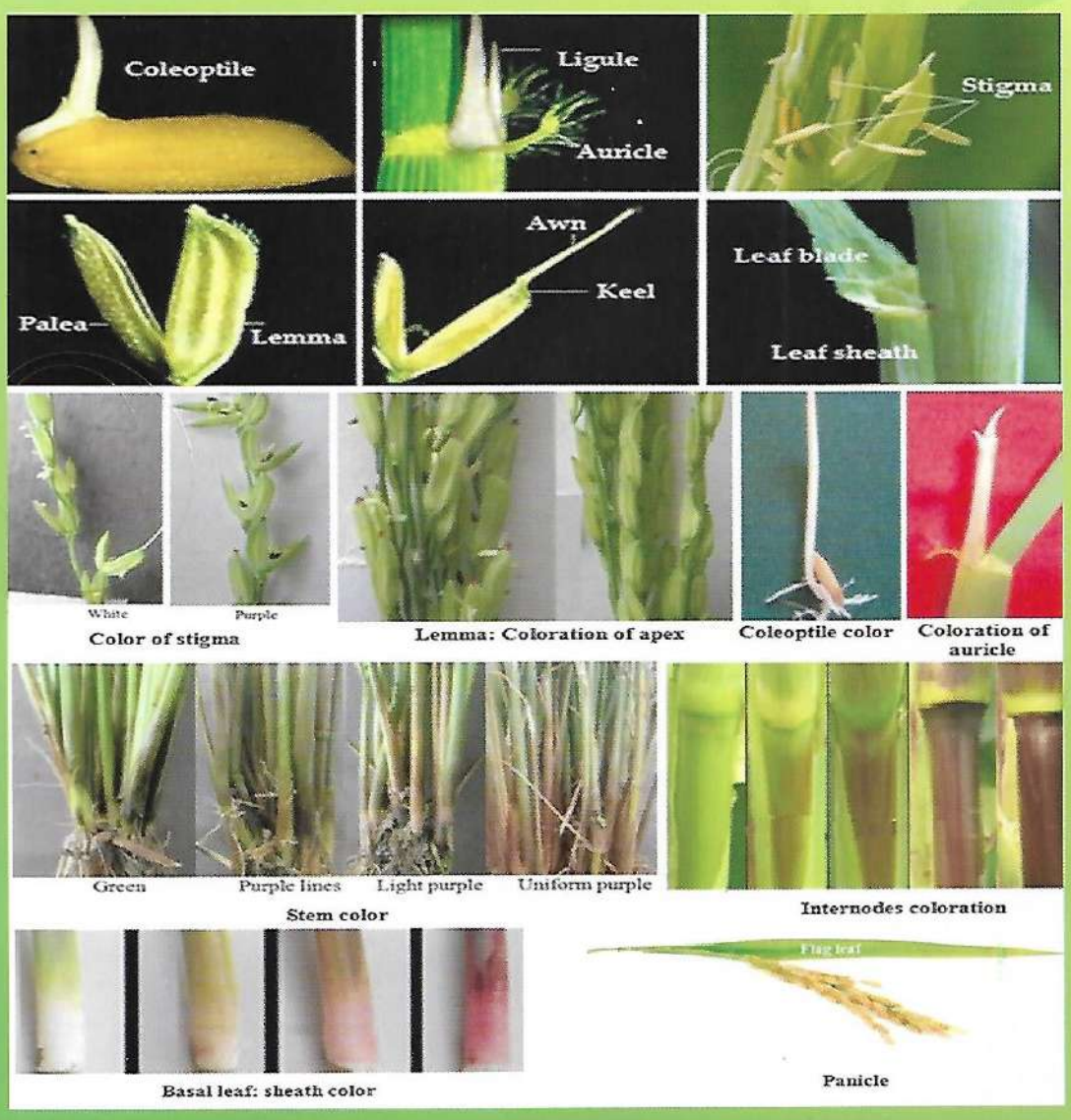
DISTINCTNESS, UNIFORMITY AND STABILITY (DUS) TEST CHARACTERISTICS OF BRRI DEVELOPED 100 RICE VARIETIES

(BR1 to Bangabandhu dhan100)



Strengthening Seed Certification Activities Project (SSCAP)

SEED CERTIFICATION AGENCY

Ministry of Agriculture, Gazipur-1701.

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Father of the Nation Bangabandhu Sheikh Mujibur Rahman

"I couldn't purchase rice anywhere from the world despite putting all my efforts. If we want to live on with rice, we have to produce rice"

Convocation Speech in 1973
Bangladesh Agricultural University, Mymensingh

DISTINCTNESS, UNIFORMITY AND STABILITY (DUS) TESTS CHARACTERISTICS OF BRRI DEVELOPED 100 RICE VARIETIES

(BR1 to Bangabandhu dhan100)

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PREFACE

Seed is the basic input in agriculture. To feed 164 million people of the country and to achieve sustainable food and nutrition security, we must develop high quality varieties to increase yield vertically. Seed Science and Technology is no more confined within the developed countries. According to UPOV, DUS test activities are being practiced in our country through Seed Certification Agency as a routine work for release of new varieties of notified crops since 2000. Proposed varieties are tested to determine if they are unique, to make a botanical descriptor and to ensure their agronomic merit. The varieties which successfully passed the DUS test for uniqueness and VCU test for merit are put in the list of new varieties. In addition, varieties that pass through DUS test become eligible for a grant of Plant Breeders' Right, a form of intellectual property right which allows the breeder to recoup his investment by charging royalties for the growing of his variety.

I am glad to know that Seed Regulation and Quality Control Wing of SCA is publishing **"DUS (Distinctness, Uniformity and Stability) Test Characteristics of BRRI Developed 100 Rice Varieties (BR1 to Bangabandhu dhan100)".** I hope this will be a path finder to the variety testing officers and breeders as well as seed technologists. This may be used as a reference book for those who will conduct DUS, VCU Tests, Pre-post control Grow out tests. Valuable suggestions from every corner will be cordially accepted for its improvement in the next edition.

I duly acknowledge the financial support from Strengthening Seed Certification Activities Project (SSCAP) for publishing this book. I give special thanks to Dr. Sadiqur Rahman, Project Director of SSCAP for printing this book.

We must continue our coordinated endeavor to provide the farmers with superior varieties of crops.

(Md. Aminul Islam)
Director
Seed Certification Agency
Gazipur-1701

ACKNOWLEDGEMENT

In Bangladesh, during the last decades considerable efforts have been made to improve seed production and supply. There is also growing awareness of the value of quality seeds in increasing agricultural production. More attention would need to be given in the preparation and implementation on evaluation and release of new varieties, and hence, quality control and distribution of seeds are ensured. In Seed Certification Agency, proposed varieties are being tested for their uniqueness and agronomical merit such as yield through DUS and VCU test. This publication of **"DUS (Distinctness, Uniformity and Stability) Test Characteristics of BRRI Developed 100 Rice Varieties (BR1 to Bangabandhu dhan100)"** followed by UPOV (The International Union for the Protection of New Varieties of Plants) guidelines will definitely help authorities who are directly related to conduct DUS test in SCA to meet up the technical standards to examine the DUS of new varieties of plants and ensure Plant Breeders' Rights.

This manuscript has got published due to active participation and coordination of Variety Testing personnel of SCA. I would like to express my deepest gratitude to all the personnel who directly or indirectly help us to publish this book. I expect it would serve as an important document to provide necessary information to SCA personnel, researchers and other stakeholders.

I would like to give my special thanks to Mohammad Enayet-e-Rabbi, DD(QC); Rebeka Parveen, ADD (SRQC); Farhana Jenny, SCO; Sefat-E-Jamal, SCO; Sanjoy kumer Debsharma,SO, BRRI; and Popy Rani Roy, SCO for their valuable contribution for compilation and proof reading of the book.

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Introduction

The International Union for the Protection of New Varieties of Plants (UPOV) is an intergovernmental organization based in Geneva, Switzerland. UPOV was established in 1961 by the International Convention for the Protection of New Varieties of Plants (the "UPOV Convention").

The mission of UPOV is to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.

The UPOV Convention provides the basis for members to encourage plant breeding by granting breeders of new plant varieties an intellectual property right; the breeder's right. According to Article 7 of the 1961/1972 and 1978 Acts and Article 12 of the 1991 Act of the UPOV Convention, protection can only be granted in respect of a new plant variety after examination of the variety has shown that it complies with the requirements for protection laid down in those Acts and, in particular, that the variety is distinct (D) from other variety whose existence is a matter of common knowledge at the time of the filling of the application (here in after referred to as a "variety of common knowledge") and that it is sufficiently uniform (U) and stable (S), or DUS in short. The examination, or DUS test, is based mainly on growing tests, carried out by the authority competent for granting Plant Breeders' Right or by separate institutions, such as public research institutes, acting on behalf of that authority or, in some cases, on the basis of growing tests carried out by the breeder. The examination generates a description of the variety, using its relevant characteristics (e.g. plant height, leaf shape, time of flowering), by which it can be defined as a variety in terms of Article 1 (vi) of the 1991 Act of the Convention.

Study on DUS Parameters

DUS stands for distinctness, uniformity and stability (DUS) of new varieties of plants for the purpose of granting breeders' Right. The new variety should be distinct from the other varieties for at least one characteristic to pass in the DUS test. DUS testing is useful for identification of varieties, registration of varieties and plant variety protection, for varietal information system and classification of varieties into different groups, and for genetic resources. DUS guideline and testing centre was prepared by authority which was crop specific.

DUS testing is a way of determining whether a newly bred variety differs from existing varieties within the same species (the Distinctness part), whether the characteristics used to establish Distinctness are expressed uniformly (the Uniformity part) and that these characteristics do not change over subsequent generations (the Stability part). DUS tests exist so that new varieties can legally gain access to their market for granting of Plant Breeders Rights, a form of intellectual property rights designed to safeguard the substantial economic investment involved in modern plant breeding.

Criteria for Registration of Plant Varieties

Distinctness: The new variety must be clearly distinguishable in one or more characters from previously available varieties. It may differ in morphological quality, agronomic or any other character.

Uniformity: The variety must be sufficiently uniform in its relevant characteristics, subject to the variation that may be expected from the particular features of its propagation, It should be pure and look phenotypically similar. The assessment of uniformity of characteristics on the plot as a whole. In the case of 400 plants sample, the maximum number of off-types would be two (0.5% allowable).

Stability: The essential characteristics must remain unchanged under different agro-climatic conditions.

Novelty: It refers to newness of a variety.

Method of Observation

There are two method of observation:

a) Visual observation: Visual observation made on the basis of expert's judgement, usually in comparison to a reference point and includes all sensory observations (sight, smell, taste, touch). It is quicker and cheaper than measurements for example stem colouration.

b) Measurement observation: It can be observed by using linear scale e.g. ruler, weighing scales, colorimeter, dates, counts, etc. It gives numerical value often with units e.g. cm, gram, days.

Type of records:

a) MG- Single measurement of a group of plants or parts of plants.

b) MS- Measurement of a number of individual plants or parts of plants.

c) VG- Visual assessment by a single observation of a group of plants or parts of plants.

d) VS- Visual assessment by observation of individual plants or parts of plants.

When a method of observation is attributed to a certain characteristic, the first differentiation is made on the basis of action taken either visual observation (V) or a measurement (M). The second differentiation deals with the number of observations the expert attributes to each variety, thus the attribution of either G or S. If a single observation of a group consisting of an undefined number of individual plants is appropriate to assess the expression of a variety, this type of record expressed either VG or MG. example, measurement of plant length on a plot (MG), green colour of leaves on a plot (VG).

Observation on a number of individual plants that assess the expression of a variety could be expressed by S (thus either VS or MS). For example, measurement of length of ears (MS) and growth habit of single plants in grasses (VS). Colour characteristics, can be assessed with the help of Royal Horticultural Society colour chart.

Grouping of varieties: The candidate varieties for DUS testing shall be divided into groups to facilitate the assessment of distinctness. Some characteristics are proposed to be used for grouping in case rice varieties such as basal leaf, sheath colour, time of heading and content of amylose etc.

DUS Test Design

The use of experimental design with respect to the number of growing cycles, lay out of the trial, number of plants to be examined and method of observation is largely determined by the number and nature of varieties to be examined in a particular trial. In DUS trials, because of the presence of only one treatment factor (variety), the following designs are used.

1. Completely Randomized Design: This design was applied if total number of test varieties is small.
2. Randomised Complete Block Design: When number of plots per block equals the number of varieties and all varieties are placed in each block this design is used. The advantage is that standard deviation between plots does not contain variation due to difference in blocks.
3. Randomised Incomplete Block Design: In case of large number of varieties. Here, the number of plots per block is less than the number of varieties this type of design.

The Zadoks Decimal Growth Stages

Growth is a complex process wih different organs developing, growing and dying in overlapping sequences. However, it is easier to think of it as a series of growth stages as in the Zadoks scale. This has 10 main stages, labelled 0 to 9, which described the crop. These are named in the following table.

0	Germination	5	Ear/ Panicle emergence
00	Dry seed	50	-
01	Start of water absorption(imbibition)	51	First spikelet or ear just visible
02		52	-
03	Water absorption complete seed swollen	53	¼ of ear emerged
04		54	-
05	Root (radicle) emerged from seed	55	½ of ear emerged
06	-	56	-
07	Shoot (coleoptiles) emerged from seed	57	¾ of ear emerged
08	-	58	-
09	Leaf just at coleoptile tip	59	Emergence of ear complete
1	**Seedling growth**	**6**	**Flowering**
10	First leaf through coleoptile	60	-
11	First leaf unfolded	61	Beginning of anthesis
12	2 leaves unfolded	62	-
13	3 leaves unfolded	63	-
14	4 leaves unfolded	64	-
15	5 leaves unfolded	65	Flowering halfway
16	6 leaves unfolded	66	-
17	7 leaves unfolded	67	-
18	8 leaves unfolded	68	-
19	9 or more leaves unfolded	69	Flowering complete
2	**Tillering**	**7**	**Milk development**
20	Main shoot only	70	-
21	Main shoot and 1 tiller	71	Grain (caryopsis) water ripe
22	Main shoot and 2 tiller	72	-
23	Main shoot and 3 tiller	73	Early milk
24	Main shoot and 4 tiller	74	-
25	Main shoot and 5 tiller	75	Medium milk
26	Main shoot and 6 tiller	76	-
27	Main shoot and 7 tiller	77	Late milk
28	Main shoot and 8 tiller	78	-
29	Main shoot and 9 or more tillers	79	-
3	**Stem Elongation**	**8**	**Dough development**
30	Pseudostem (leaf sheath) exertion	80	-
31	1^{st} node detectable	81	-
32	2^{nd} node detectable	82	-
33	3^{rd} node detectable	83	Early dough
34	4^{th} node detectable	84	-
35	5^{th} node detectable	85	Soft dough
36	6^{th} node detectable	86	-
37	Flag leaf just visible	87	Hard dough
38	-	88	-
39	Flag leaf ligule/collar just visible	89	-

4	**Booting**	9	**Ripening**
40	-	90	-
41	Flag leaf sheath extending	91	Grain hard
42	-	92	-
43	Boots just visible swollen	93	Grain loosening in day time
44	-	94	Over ripe straw dead and collapsing
45	Boots swollen	95	Seed dormant
46	-	96	Viable seed giving 50% germination
47	Flag leaf sheath opening	97	Seed not dormant
48	-	98	Secondary dormancy induced
49	First awns visible (where appropriate)	99	Secondary dormancy lost

DUS Test Characters of Inbred Rice

SN	Characteristics	Observation time/stage (Zadok'sscale)	States of the character	Code
1.	Leaf sheath: anthocyanin color	15-17	Absent	1
			Present	9
2.	Leaf color	25-40	Pale green	1
			Green	2
			Dark green	3
			Purple tip	4
			Purple margins	5
			Purple blotch	6
			Purple	7
3.	Penultimate leaf : pubescence of blade	40	Absent or very weak	1
			Weak or only on the margins	3
			Medium hairs on the lower portion of the leaf	5
			Strong hairs on the leaf blade	7
			Very strong	9
*4.	Penultimate leaf : anthocyanin coloration of auricles & collar	40	Absent	1
			Present	9
*5.	Penultimate leaf: Ligule	40-45	Absent	1
			Present	9
6.	Penultimate leaf: shape of the ligule	40-45	Truncate	1
			Acute	2
			Split or two-cleft	3
*7.	Flag leaf: attitude of blade	60-65	Erect (<30)	1
			Intermediate or semi-erect (30-45)	3
			Horizontal (45-90)	5
			Reflexed or descending (>90)	7
*8.	Time of heading (50% of plants with heads)	55	Very early (< 70 days)	1
			Early (70-85 days)	3
			Medium (86-105 days)	5
			Late (106-120 days)	7
			Very late (> 120 days)	9
*9(a).	Male sterility	55-59	Absent	1
			CMS	3
			TGMS	5
			PGMS	7
			P(T)GMS	9

SN	Characteristics	Observation time/stage (Zadok'sscale)	States of the character	Code
9(b).	Microscopic Oservation of Pollen with I_2-KI solution	55-59	Completely sterile with TA Pollen	1
			Completely sterile with 80% TA Pollen	2
			Completely sterile with 50% TA Pollen	3
			Sterile (91-99%)	4
			Partial sterile (31-70%)	5
			Partial fertile (31-70%)	6
			Fertile (21-30%)	7
			Fully fertile (0-20%)	8
10.	Lemma & palea: anthocyanin colouration	75-85	Absent or very weak	1
			Weak	3
			Medium	5
			Strong	7
			Very strong	9
11.	Lemma & palea: anthocyanin colouration below apex	75-85	Absent or very weak	1
			Weak	3
			Medium	5
			Strong	7
			Very strong	9
*12.	Lemma: anthocyanin colouration of apex	75-85	Absent or very weak	1
			Weak	3
			Medium	5
			Strong	7
			Very strong	9
13(a).	Colour of stigma	65	White	1
			Light green	2
			Yellow	3
			Light purple	4
			Purple	5
13(b).	Stigma exertion	68-69	No or a few (<5%)	1
			Low (5-20%)	3
			Medium (21-40%)	5
			High (41-60%)	7
			Very high (>61%)	9
14.	Stem: Culm diameter (from 5 mother tillers in the lowest internode)	65	Small (< 5.0 mm)	1
			Medium (5.1-6.0 mm)	3
			Large (6.1-7.0 mm)	5
			Very Large (> 7.0 mm)	7

SN	Characteristics	Observation time/stage (Zadok'sscale)	States of the character	Code
*15.	Stem length (Culm length) : measure from the base of the plants to the neck of the panicles	70	Very short (< 40 cm)	1
			Short (41-60 cm)	3
			Medium (61-80 cm)	5
			Long (81-110 cm)	7
			Very Long (> 110 cm)	9
*16.	Stem: anthocyanin colouration of nodes	70	Absent	1
			Present	9
17.	Stem: intensity of anthocyanin colouration of nodes	70	Weak	3
			Medium	5
			Strong	7
			Very strong	9
18.	Stem: anthocyanin colouration of internodes	70	Absent or very weak	1
			Weak	3
			Medium	5
			Strong	7
			Very strong	9
*19.	Panicle length: measured from the neck to the tip of the panicle of main tillers without awns	72-90	Short (< 20 cm)	3
			Medium (21-25 cm)	5
			Long (26-30 cm)	7
			Very long (> 30 cm)	9
*20.	Panicle: curvature of main axis	90	Absent or very weak	1
			Weak	3
			Medium	5
			Strong	7
21.	Panicle: number of effective tillers per plant	75-90	Few (<6)	3
			Medium (6-10)	5
			Many (>10)	7
*22.	Spikelet: Pubescence of lemma & palea	60-80	Absent or very weak	1
			Weak	3
			Medium	5
			Strong	7
			Very strong	9
23.	Spikelet: colour of the tip of lemma	65-90	White	1
			Yellowish	2
			Brownish	3
			Red	4
			Purple	5
			Black	6

SN	Characteristics	Observation time/stage (Zadok'sscale)	States of the character	Code
24.	Spikelet: awns in the spikelet	90	Absent	1
			Present	9
25.	Spikelet: length of the longest awn	90	Very short (< 2 mm)	1
			Short (2-5 mm)	3
			Medium (5-10 mm)	5
			Long (11-20 mm)	7
			Very long (> 20 mm)	9
*26 (a).	Panicle: distribution of awns	90	Tip only	1
			Upper half only	3
			Whole length	5
26 (b).	Panicle: colour of awns	90	Yellow white	1
			Brown	3
			Reddish	5
			Purple	7
			Black	9
*27.	Panicle: attitude of branches	90	Erect	1
			Semi-erect	3
			Spreading	5
28.	Panicle: exertion	90	Enclosed	1
			Partly exerted	3
			Just exerted	5
			Moderately exerted	7
			Well exerted	9
29.	Time of maturity	92	Very early (<100 days)	1
			Early (101-115 days)	3
			Medium (116-135 days)	5
			Late (136-150 days)	7
			Very late (>150 days)	9
30.	Grain: weight of 1000 fully developed grains (adjusted at 12% of moisture)	92	Very low (<15g)	1
			Low (16-19g)	3
			Medium (20-23g)	5
			High (24-27g)	7
			Very high (>27g)	9
31.	Grain: length (without dehulling)	92	Very short (<6.0mm)	1
			Short (6.1-7.0mm)	3
			Medium (7.1-8.0mm)	5
			Long (8.1-9.0mm)	7
			Very long (>9.0mm)	9

SN	Characteristics	Observation time/stage (Zadok'sscale)	States of the character	Code
32.	Sterile lemma length:measure at post harvest stage	92	Short (<1.5mm)	1
			Medium (1.5-2.5mm)	3
			Long (2.6-3.0mm)	5
			Very long (>3.0mm)	7
33.	Decorticated grain length (After dehulling, before milling)	92	Short (<5.5mm)	1
			Medium (5.6-6.5mm)	3
			Long (6.6-7.5mm)	5
			Very long (>7.5mm)	7
34.	Leaf senescence: penultimate leaves are observed at the time of harvest.	92	Late and slow (2 or more leaves retain green colour at maturity)	1
			Intermediate	5
		92	Early and fast (leaves are dead at maturity)	9
*35.	Decorticated grain:shape {length-width (widest point) ratio of dehulled grain}		Round (L:W<1.5)	1
			Bold (L:W= 1.5-2.0)	3
			Medium (L:W= 2.1-2.5)	5
		92	Medium Slender (L:W=2.6-3.0)	7
			Slender (L:W>3.0)	9
36.	Decorticated grain (bran): colour		White	1
			Light brown	2
			Variegated brown	3
			Dark brown	4
			Red	5
		92	Variegated purple	6
			Purple	7
37.	Polished grain: size of white core or chalkiness (% of kernel area)		Absent or very small	1
			Small (>10%)	3
		92	Medium (11-20%)	5
			Large (>20%)	7
38.	Endosperm: content of amylose (non waxy type varieties)		Low (<20%)	1
		92	Intermediate (21-25%)	3
			High (>25%)	5
39.	Decorticated grain : aroma		Absent	1
			Lightly present	5
			Strongly present	9
40.	Other distinct special character (if any)	Description:		

*The asterisk characteristics, which should always be included in description of the variety, except when the state of expression of a preceding characteristic renders this impossible (UPOV/MDN/95/4-T/1/3).

As a general rule (Quantitative characteristics), states are formed in such a way that for the weak and strong expression a reasonable word pair is chosen, for example:

Weak/strong

Short/large

These word pairs are given the notes 3 and 7 and word "medium" is given the notes 5. The remaining states of the scale indicated by the notes 1 to 9 are formed according to the following example.

State	Note
Very weak	1
Very weak to weak	2
Weak	3
Weak to medium	4
Medium	5
Medium to strong	6
Strong	7
Strong to very strong	8
Very strong	9

(UPOV/MDN/95/4-T/1/3).

DUS data of BR1 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	1	Absent
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small (<5.0mm)
15	Stem: culm length	3	Short (41-60cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	1	Absent
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	
26a	Panicle: distribution of awns	-	
26b	Panicle: color of awns	-	
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	5	Medium (7.1-8.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium(L:W=2.1-2.5)
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small (<10%)
38	Endosperm: content of amylose	3	Intermediate(21-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		-

DUS data of BR2 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large (6.1-7.0 mm)
15	Stem: culm length	7	Long (81-80 cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR3 (Boro, Aus & Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	3	Short
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late & low
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR4 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	3	Intermediate
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR5 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi- erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	3	Weak
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	1	Very low
31	Grain: length (without dehulling)	1	Short
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	1	Short
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	9	Strongly present
40	Other distinct special character (if any)		

DUS data of BR6 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR7 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	3	Intermediate
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR8 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR9 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR10 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR11 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5-7	Just-Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR12 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	9	Present
2	Leaf color	5	Purple margin
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	9	Present
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	7	Strong
13	Spikelet: color of stigma	5	Purple
14	Stem: culm diameter	1	Small
15	Stem: culm length	3	Short
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	5	Purple
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late & low
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR14 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	9	Very long
26a	Panicle: distribution of awns	5	Whole length
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR15 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	3	Partly exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR16 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	3	Deep green
3	Penultimate leaf: pubescence of blade	9	Very strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5-7	Just-Moderately exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	5	Long
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Low GI Rice

DUS data of BR17 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	9	Very long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR18 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	5	Horizontal
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR19 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	5	Horizontal
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR20 (B. Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR21 (Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very weak
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR22 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	3	Weak
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	3	Partly exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	3	Low
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR23 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	1	Very short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	5	Long
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR24 (B.Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	3	Weak
11	Lemma & palea: anthocyanin color below apex	3	Weak
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very weak
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR25 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	7	Strong
11	Lemma & palea: anthocyanin color below apex	7	Strong
12	Lemma: anthocyanin coloration of apex	7	Strong
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	9	Very long
16	Stem: anthocyanin coloration of nodes	9	Present
17	Stem: intensity of anthocyanin color of nodes	5	Medium
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	3	Brownish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5-7	Just-moderately exerted
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	3	Low
31	Grain: length (without dehulling)	3	Short
32	Sterile lemma length: measure at post-harvest stage	1	Short
33	Decorticated grain: length (after dehulling, before milling)	1	Short
34	Leaf senescence	1	Late & slow
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very weak
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BR26 (Aus & Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	5	Long
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	1	Late & slow
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	3	Intermediate
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan27 (Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	9	Present
2	Leaf color	5	Purple margin
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	9	Present
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	1	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	7	Strong
13	Spikelet: color of stigma	5	Purple
14	Stem: culm diameter	5	Large
15	Stem: culm length	9	Very long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	5	Purple
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	10	Late & Slow
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan28 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	5	Horizontal
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5-7	Just to moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan29 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	9	Very strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5	Just-exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late & slow
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan30 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	1	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan31 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	7	Very large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan32 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan33 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	3	Bold
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	3	Intermediate
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan34 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi- erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	9	Very long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	7	Strong
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	1	Very low
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	1	Short
34	Leaf senescence	9	Early and fast
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	9	Strongly present
40	Other distinct special character (if any)		

DUS data of BRRI dhan35 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	3	Weak
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan36 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5	Just-exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan37 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	5	Horizontal
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	5	Medium
26a	Panicle: distribution of awns	3	Upper half only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	1	Very low
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	9	Strongly present
40	Other distinct special character (if any)		

DUS data of BRRI dhan38 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	5	Horizontal
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	5	Medium
26a	Panicle: distribution of awns	5	Whole length
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	1	Very low
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	5	Long
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	9	Strongly present
40	Other distinct special character (if any)		

DUS data of BRRI dhan39 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5	Just-exerted
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylase	3	Intermediate
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan40 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	3	Weak
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	5	Medium
26a	Panicle: distribution of awns	3	Upper half only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5-7	Just-moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan41 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	9	Very strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi- erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	5	Long
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Inermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan42 (Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan43 (Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan44 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	9	Very long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	9	Very high
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan45 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately-exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan46 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan47 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Weak or Absent
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	3-5	Partly to Just exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Salt tolerant

DUS data of BRRI dhan48 (Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellowish white
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late & slow
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan49 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan50 (Banglamoti) (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	5	Horizontal
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	3	Short
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	3	Low
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	5	Long
33	Decorticated grain: length (after dehulling, before milling)	7	Very long
34	Leaf senescence	1	Late & slow
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	5	Lightly present
40	Other distinct special character (if any)		

DUS data of BRRI dhan51 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	3	Dark green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	3	Weak
11	Lemma & palea: anthocyanin color below apex	3	Weak
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	3	Short
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	3-5	Partly to Just exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Submergence tolerant

DUS data of BRRI dhan52 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent
11	Lemma & palea: anthocyanin color below apex	1	Absent
12	Lemma: anthocyanin coloration of apex	1	Absent
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-Erect
28	Panicle: exertion	5-7	Just-Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Submergence tolerant

DUS data of BRRI dhan53 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	9	Present
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	5	Medium
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	7	Strong
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	7	Long (26-30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	5	Purple
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	7	Very long (>7.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Salt tolerant (8-10dS/m)

DUS data of BRRI dhan54 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	5	Medium (86-105 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	7	Very large (>7.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	7	Long (26-30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	1	White
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High (24-27g)
31	Grain: length (without dehulling)	5	Medium (7.1-8.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium (L:W=2.1-2.5)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	3	Small (<10%)
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan55 (Boro & Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	3	Dark Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	1	White
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	1	Very short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellow white
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	9	Very long (>9.0mm)
32	Sterile lemma length: measure at post-harvest stage	5	Long (2.6-3.0mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan56 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	5	Medium (86-105 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	5	Medium
11	Lemma & palea: anthocyanin color below apex	5	Medium
12	Lemma: anthocyanin coloration of apex	3	Weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	5	Medium (116-135 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan57 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	3	Early (70-80 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	3	Short (41-60cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early (101-115 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	3	Low (16-19g)
31	Grain: length (without dehulling)	9	Very long (>9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (6.6-7.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan58 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	7	Strong
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan59 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	9	Very late (>120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	3	Short (41-60cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	9	Very late (>150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	5	Medium (7.1-8.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium (L:W=2.1-2.5)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	3	Small (<10%)
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan60 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very week
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	9	Very late (>120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	9	Very late (>150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	9	Very long (>9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (6.6-7.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan61 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	9	Present
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	7	Strong
13	Spikelet: color of stigma	5	Purple
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many(>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	5	Purple
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Salt Tolerant

DUS data of BRRI dhan62 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	3	Early (70-80 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small (<5.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	3	Early (101-115 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High (24-27g)
31	Grain: length (without dehulling)	9	Very long (>9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (6.6-7.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Zinc enriched (19.5 mg/kg)

DUS data of BRRI dhan63 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	9	Very late (>120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small (<5.0mm)
15	Stem: culm length	3	Short (41-60cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	9	Very late (>150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	9	Very long (>9.0mm)
32	Sterile lemma length: measure at post-harvest stage	5	Long (2.6-3.0mm)
33	Decorticated grain: length (after dehulling, before milling)	7	Very Long (6.6-7.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan64 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	9	Very late (>120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7-9	Moderate-well exerted
29	Time of maturity	9	Very late (>150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High (24-27g)
31	Grain: length (without dehulling)	5	Medium (7.1-8.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	3	Bold (L:W=1.5-2.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	5	Medium (10-20%)
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Zinc enriched (24mg/kg)

DUS data of BRRI dhan65 (Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	3	Early (70-80 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small (<5.0mm)
15	Stem: culm length	3	Short (41-60cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early (101-115 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (6.6-7.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan66 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	5	Medium (86-105 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	7	Long (26-30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	5	Medium (116-135 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High (24-27g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan67 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Salt tolerant (8 dS/m)

DUS data of BRRI dhan68 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High (24-27g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (6.6-7.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	5	Medium (10-20%)
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan69 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large (6.1-7.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium Slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan70 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	9	Present
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very weak
4	Penultimate leaf: anthocyanin color of auricles & collar	9	Present
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	5	Medium (86-105 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	4	Red
14	Stem: culm diameter	5	Large (6.1-7.0mm)
15	Stem: culm length	9	Very long (>110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	7	Long (26-30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	5	Purple
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	1	Very short (<2mm)
26a	Panicle: distribution of awns	5	Reddish
26b	Panicle: color of awns	1	Tip only
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	5	Medium (116-135 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	9	Very long (>9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (6.6-7.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	5	Lightly present
40	Other distinct special character (if any)		

DUS data of BRRI dhan71 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	3	Early (70-80 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early (101-115 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High (24-27g)
31	Grain: length (without dehulling)	9	Very long (>9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Drought tolerant

DUS data of BRRI dhan72 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	5	Medium (86-105 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large (6.1-7.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	7	Long (26-30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short (2-5mm)
26a	Panicle: distribution of awns	1	Yellow white
26b	Panicle: color of awns	1	Tip only
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	5	Medium (116-135 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	9	Very high (>27g)
31	Grain: length (without dehulling)	9	Very long (>9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (6.6-7.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Zinc enriched (22.8 mg/kg)

DUS data of BRRI dhan73 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	5	Medium (86-105 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	7	Long (26-30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	1	Very short (<2mm)
26a	Panicle: distribution of awns	1	Yellow white
26b	Panicle: color of awns	1	Tip only
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5-7	Just-moderately exerted
29	Time of maturity	5	Medium (116-135 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan74 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	9	Very high (>27g)
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	5	Medium (10-20%)
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Zinc enriched (24.2 mg/kg)

DUS data of BRRI dhan75 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect (30-45)
8	Time of heading (50% of plants with heads)	3	Early (70-80 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large (6.1-7.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7-9	Moderate-well exerted
29	Time of maturity	3	Early (101-115 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate (20-25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan76 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	9	Very late (>120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large (6.1-7.0mm)
15	Stem: culm length	9	Very long (>110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	9	Very long (>30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	9	Very late (>150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High (24-27g)
31	Grain: length (without dehulling)	5	Medium (7.1-8.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium (L:W=2.1-2.5)
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small (<10%)
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan77 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large (6.1-7.0mm)
15	Stem: culm length	9	Very long (>110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	7	Long (26-30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	9	Very high (>27g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium (L:W=2.1-2.5)
36	Decorticated unpolished grain: color	3	Variegated brown
37	Polished grain: size of white core or chalkiness	5	Medium (10-20%)
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan78 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long(81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	7	Long(26-30cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5-7	Just to Moderate
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent or very small
40	Other distinct special character (if any)		

DUS data of BRRI dhan79 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Submergence Tolerant

DUS data of BRRI dhan80 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	9	Present
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	9	Present
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1-3	Erect to semi-erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	7	Strong
13	Spikelet: color of stigma	5	Purple
14	Stem: culm diameter	5	Large
15	Stem: culm length	9	Very long
16	Stem: anthocyanin coloration of nodes	9	Present
17	Stem: intensity of anthocyanin color of nodes	7	Strong
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	5	Purple
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate
39	Decorticated grain: aroma	5	Lightly present
40	Other distinct special character (if any)		

DUS data of BRRI dhan81 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan82 (T. Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	1	Absent or very weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	5	Horizontal
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	3	Weak
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan83 (T & B. Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	7	Strong
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	4	Red
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan84 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3-5	Weak to medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	5	Horizontal
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	5	Red
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Zinc content(27.6mg/kg)

DUS data of BRRI dhan85 (T. Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	3	Early
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	3	Early
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan86 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	3	Dark green
3	Penultimate leaf: pubescence of blade	3-5	Weak to medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	1	Very short
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellow white
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exered
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan87 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5-7	Just to Moderately exerted
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan88 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	7	Strong
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan89 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	7	Strong
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	1	White
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan90 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	7	Strong
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	1	Very low
31	Grain: length (without dehulling)	1	Very short
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	1	Short
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	3	Intermediate
39	Decorticated grain: aroma	5	Lightly present
40	Other distinct special character (if any)		

DUS data of BRRI dhan91 (B. Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	9	Present
2	Leaf color	3	Dark green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	3	Brownish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	9	Early and fast
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan92 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	7	Strong
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	9	Very late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	7	Strong
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	9	Very late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	7	High
31	Grain: length (without dehulling)	9	Very long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	5	Long
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	9	Slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan93 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	3	Low
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan94 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	3	Low
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan95 (Aman)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	3	Deep Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	5	Medium
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	9	Very strong
11	Lemma & palea: anthocyanin color below apex	9	Very strong
12	Lemma: anthocyanin coloration of apex	7	Strong
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	5	Large
15	Stem: culm length	7	Long
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	7	Long
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	3	Brownish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5-7	Just to Moderate
29	Time of maturity	5	Medium
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium
31	Grain: length (without dehulling)	5	Medium
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	1	Short
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	5	Medium
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan96 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	3	Weak
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	7	Late
9	Male sterility	-	-
10	Lemma & palea: anthocyanin color	5	Medium
11	Lemma & palea: anthocyanin color below apex	5	Medium
12	Lemma: anthocyanin coloration of apex	3	Weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small
15	Stem: culm length	5	Medium
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	-	-
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	5	Just exerted
29	Time of maturity	7	Late
30	Grain: weight of 1000 fully developed grains (at 12% MC)	3	Low
31	Grain: length (without dehulling)	7	Long
32	Sterile lemma length: measure at post-harvest stage	3	Medium
33	Decorticated grain: length (after dehulling, before milling)	3	Medium
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small
38	Endosperm: content of amylose	5	High
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

DUS data of BRRI dhan97 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	9	Present
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect
8	Time of heading (50% of plants with heads)	7	Late (>120 days)
9	Male sterility	1	Absent
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	1	Absent
18	Stem: anthocyanin coloration of internodes	9	Present
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	5	Medium
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Salinity Tolerant

DUS data of BRRI dhan98 (T. Aus)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi erect (30-45)
8	Time of heading (50% of plants with heads)	5	Medium (86-105 days)
9	Male sterility	1	Absent
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	1	Small (<5.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	1	Absent
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	9	Present
25	Spikelet: length of the longest awn	3	Short (2-5mm)
26a	Panicle: distribution of awns	1	Tip only
26b	Panicle: color of awns	1	Yellow white
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	5	Medium (116-135 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	7	Long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (6.6-7.5mm)
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W>3.0)
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	3	Small (<10%)
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		

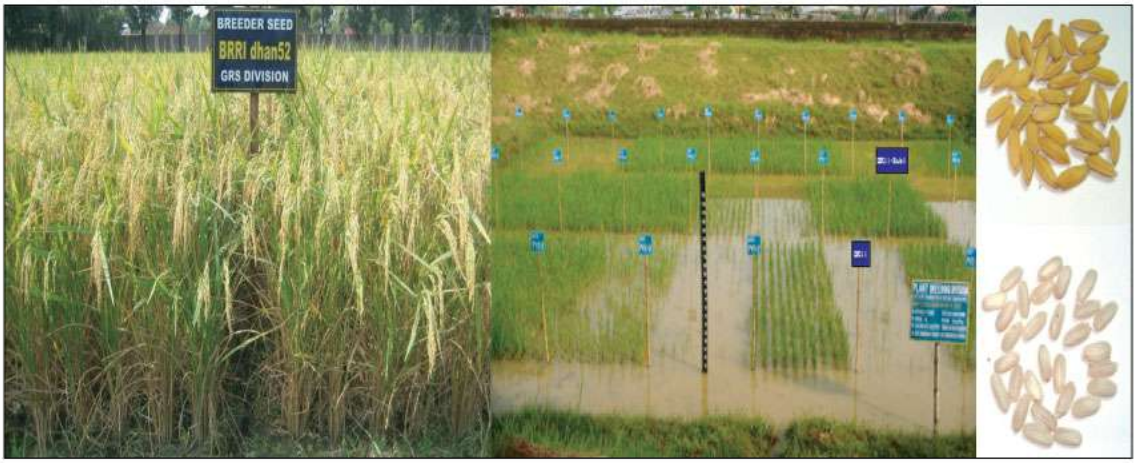
DUS data of BRRI dhan99 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	3	Semi-erect
8	Time of heading (50% of plants with heads)	7	Late (>120 days)
9	Male sterility	1	Absent
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	7	Long (81-110cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	1	Absent
18	Stem: anthocyanin coloration of internodes	1	Absent
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	5	Medium (6-10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-erect
28	Panicle: exertion	9	Well exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	5	Medium (20-23g)
31	Grain: length (without dehulling)	9	Very long (8.1-9.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	5	Long (81-110cm)
34	Leaf senescence	1	Late and slow
35	Decorticated grain: shape (L/B ratio)	9	Slender (L:W=>3.0)
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Salinity Tolerant

DUS data of Bangabandhu dhan100 (Boro)

SN	Characteristics	Code	Status
1	Leaf sheath: anthocyanin color	1	Absent
2	Leaf color	2	Green
3	Penultimate leaf: pubescence of blade	5	Medium
4	Penultimate leaf: anthocyanin color of auricles & collar	1	Absent
5	Penultimate leaf: ligule	9	Present
6	Penultimate leaf: shape of the ligule	3	Split or two-cleft
7	Flag leaf: attitude of the blade	1	Erect (<30)
8	Time of heading (50% of plants with heads)	7	Late (106-120 days)
9	Male sterility	1	Absent
10	Lemma & palea: anthocyanin color	1	Absent or very weak
11	Lemma & palea: anthocyanin color below apex	1	Absent or very weak
12	Lemma: anthocyanin coloration of apex	1	Absent or very weak
13	Spikelet: color of stigma	1	White
14	Stem: culm diameter	3	Medium (5.1-6.0mm)
15	Stem: culm length	5	Medium (61-80cm)
16	Stem: anthocyanin coloration of nodes	1	Absent
17	Stem: intensity of anthocyanin color of nodes	1	Absent
18	Stem: anthocyanin coloration of internodes	1	Absent or very weak
19	Panicle: length	5	Medium (21-25cm)
20	Panicle: curvature of main axis	5	Medium
21	Panicle: number of effective tillers per plant	7	Many (>10)
22	Spikelet: pubescence of lemma & palea	7	Strong
23	Spikelet: color of tip of lemma	2	Yellowish
24	Spikelet: awns in spikelet	1	Absent
25	Spikelet: length of the longest awn	-	-
26a	Panicle: distribution of awns	-	-
26b	Panicle: color of awns	-	-
27	Panicle: attitude of branches	3	Semi-errect
28	Panicle: exertion	7	Moderately exerted
29	Time of maturity	7	Late (136-150 days)
30	Grain: weight of 1000 fully developed grains (at 12% MC)	3	Low (16-19g)
31	Grain: length (without dehulling)	5	Medium (7.1-8.0mm)
32	Sterile lemma length: measure at post-harvest stage	3	Medium (1.5-2.5mm)
33	Decorticated grain: length (after dehulling, before milling)	3	Medium (5.6-6.5mm)
34	Leaf senescence	5	Intermediate
35	Decorticated grain: shape (L/B ratio)	7	Medium slender
36	Decorticated unpolished grain: color	2	Light brown
37	Polished grain: size of white core or chalkiness	1	Absent or very small
38	Endosperm: content of amylose	5	High (>25%)
39	Decorticated grain: aroma	1	Absent
40	Other distinct special character (if any)		Zinc enriched (25.7mg/kg)

BRRI dhan51



BRRI dhan52

BRRI dhan53

BRRI dhan54

BRRI dhan55

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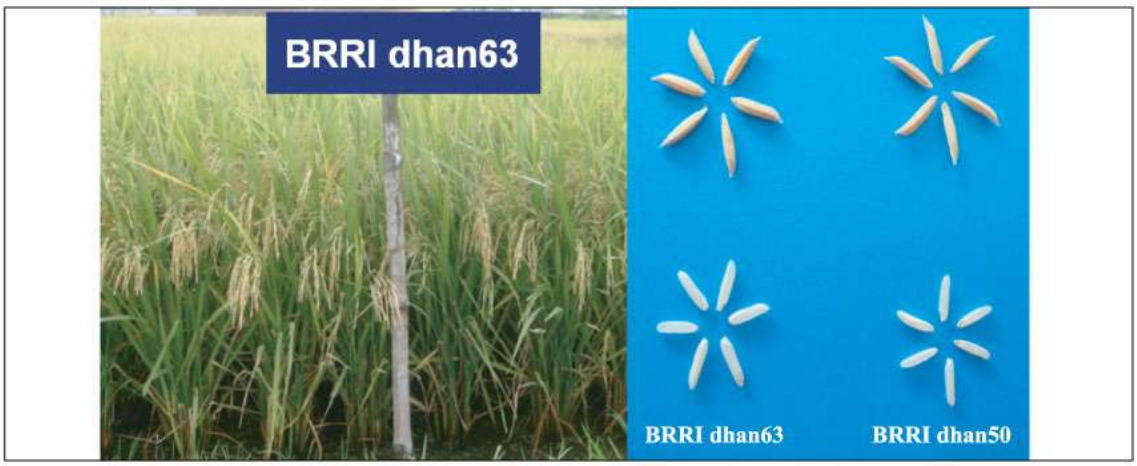
BRRI dhan58

BRRI dhan59

BRRI dhan60

BRRI dhan61

BRRI dhan62

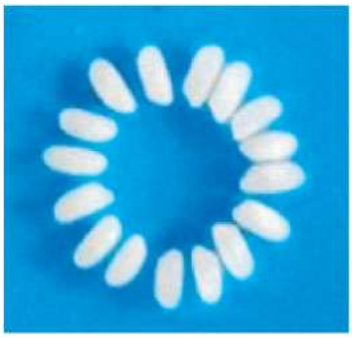


BRRI dhan63

BRRI dhan64

BRRI dhan65





BRRI dhan66

BRRI dhan67

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BRRI dhan77

Conclusion

The mission of UPOV is to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants for the benefit of society. So, DUS testing has an imperative role before release of plant varieties that providing an opportunity for the legal protection of plant varieties, diversification of agriculture and overall growth of agriculture.

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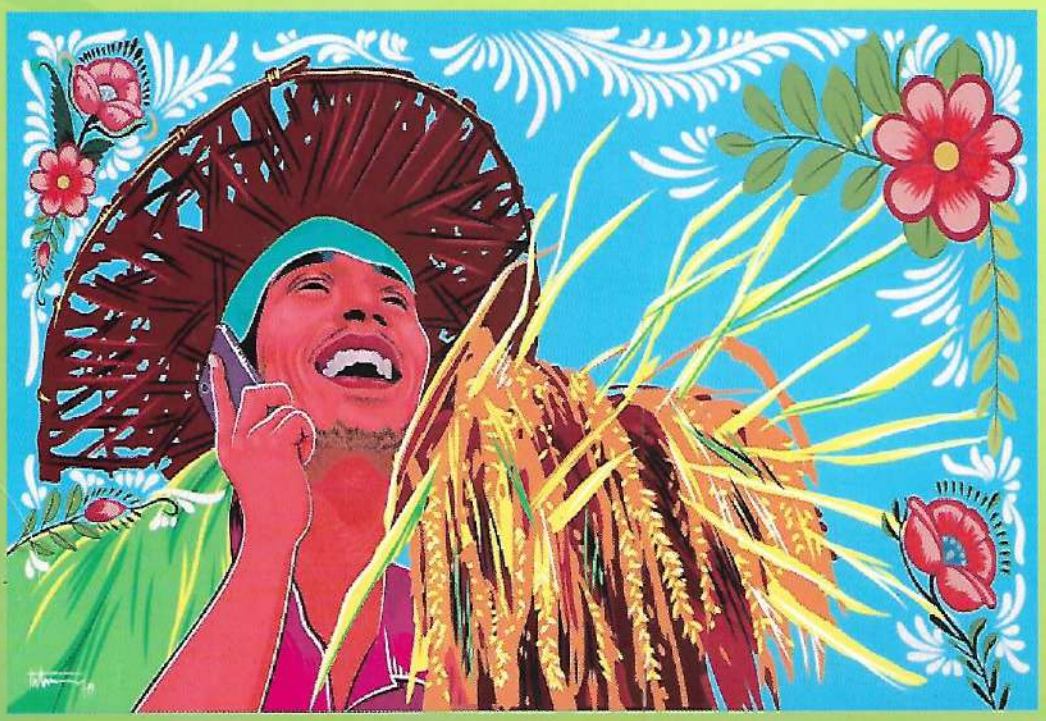

Strengthening Seed Certification Activities Project (SSCAP)

SEED CERTIFICATION AGENCY

Ministry of Agriculture

Gazipur-1701

www. sca.gov.bd