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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

**TECHNICAL WORKING PARTY
FOR
AGRICULTURAL CROPS**

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COMMENTS ON DRAFT TEST GUIDELINES FOR RICE

Comments prepared by experts from the International Rice Research Institute (IRRI)

Section IV

It will be useful to conduct the test in at least two distinct seasons in order to assess the stability of distinct characters in different climatic condition.

Section V No. 2

It is recommended that the competent authorities use the following.....

- a) Penultimate leaf: Anthocyanin coloration of auricles (char. 4)
- b) Time of heading (char. 8)
- c) Stem/Culm length...
- d) Decorticated grain: length (char. 33)
- e) Tillering characteristics of the variety not mainly productive but also non-productive tillers
- f) Basal leaf sheet color which is a dominant character taken at maximum vegetative stage (40)
- g) Eco-geographic race of a variety: (Japonica/sinica; Indica; Javanica; or intermediate hybrids)

Section VII. Table of characteristics

- 1 and 2 can be combined as Leaf color: Pale green; Green; Dark green; Purple tip; Purple margins; Purple blotch; and purple
3. Penultimate leaf pubescence: Glabrous or absent to very weak; Weak or only on the margins; Medium or short hairs on the upper portion of the leaf; Strong or short hairs on leaf blade; and Very strong or Velvety.
4. Aside from the anthocyanin coloration of the auricle it will be useful to get also the anthocyanin coloration of the collar.
5. Penultimate leaf ligule: It will also be useful to measure the length and not merely the absence or presence of it in a variety.
6. Penultimate leaf ligule shape; Acute; truncate; split or 2-cleft as indicated in rice descriptors
7. Flag leaf angle (angle of attachment) or attitude of the blade: Stage 50 is not the proper timing to record this character because significant changes occur between flowering to ripening stage (90): Erect; Semi erect or intermediate; Horizontal; and reflexed or descending
8. Time of heading (50% of plants with heads): or just record the time of flowering wherein 50 % of plants with heads and 50% of the spikelets in the panicle dehisce? It will be useful to include the cut-off time or number of days that represents each code; e.g. very early = < 50 days etc.
9. Male sterility: or Male sterility group with the following scale instead of merely absence or presence. This is important in patenting Male sterile lines or female parents in hybrid production.
 - 1 Cytoplasmic nuclear interaction type
 - 2 Thermosensitive-genic type (TGMS)
 - 3 Photoperiod-sensitive genic type (PGMS)
 - 4 Thermo-photoperiod genic type (TPGMS)
 - 5 Genetically engineered (transgenic) type
 - 6 Nuclear type

With some information on degree of male sterility from completely to < 70 % etc.

- 10 Lemma: Anthocyanin coloration of keel: It will be better to record this trait as Lemma and Palea color as known in the Rice Descriptors as

010- white
 020- straw
 052- brown (tawny)
 053- brown spots
 054- brown furrows
 080- purple
 082- reddish to light purple
 090- purple spots
 091- purple furrows
 100- black

- 11 and 12 Lemma: coloration of the apex (Apiculus color in the descriptors and are taken at flowering-soft dough stage and maturity because of the changes occurring as the seed matures)

010- white
 020- straw
 052- brown (tawny)
 070- red
 071- red apex (tip color extending to the upper portion of the lemma and palea)
 080- purple
 087- purple apex (tip color extends to the upper portion of the lemma and palea)
 100- black

14. Stem: thickness or Culm diameter as stated in the descriptors: range of value in probably in (mm) should be included and the part of the stem as well as the time of data collection. In the characterization at the IRRI's genebank, this is taken from 5 mother tillers at maturity and measurement is done at the lowest internode.
15. Stem Length (Culm Length): From the base of the plants to the neck of the panicles and measured in centimeters (cm)
- 16.-17. Stem: Anthocyanin coloration of the nodes: Nodes can be described in at least four colors; Green; Light gold; light purple; and purple
18. Stem: Anthocyanin coloration of the inter-nodes: (can also be in Green; Light gold; Purple; And Purple lines)
19. Panicle: Length of the axis: measurement from the panicle neck (panicle base) to the tip of the topmost spikelet, in cm. Range of values per category should be included (can be measure after harvest for easy measurements together with other grain data.
22. Spikelet: Pubescence of the lemma (lemma and palea pubescence): can also be characterized at post harvest as:
- 1- glabrous
 2- hairs on lemma keel
 3- hairs on upper portion
 4- short hairs (whole grain)
 5- long hairs (velvety)

23. Spikelet: Color of the tip of the lemma: See Apiculus color (12-13)
- 24-26. Panicles: Awns: Can be described as awn presence and awn color (at flowering and at maturity);
- 0- absent
 - 1- short and partly awned
 - 5- short and fully awned
 - 7- long and partly awned
- 9 Long and fully awned
- Awn color can be described with the same system as in apiculus color (12-13).27. Panicle: Attitude of the branches: Probably not on the degree of how erect the panicle are but more on how compact or open/spreading they are.
28. Panicle: Exsertion; There are rice accession whose panicles are fully enclosed and it will be useful to include enclosed as one category
29. Time of maturity: Include ranges of values for each category
3034. Grain measurements: Include ranges of values for each category
36. Decorticated grain color: (Seed coat color) Variegated purple can be included as one category
37. Polished grain: expression of the white core: Same with the chalkiness of the endosperm which can be expressed in a) white belly; b) white center c) white back or in scales as:
- 0- none
 - 1- Small (less than 10%)
 - 5- Medium (11%-20%)
 - 9- Large (more than 20%)
38. Endosperm: Amylose content: Include percent ranges per category Additional trait to record:
39. Endosperm type: taken by observing the reaction of the endosperm (cut grain) with weak solution of IKI. Waxy or glutinous has blue black coloration while non-waxy or non-glutinous type has brownish color reaction.
40. Leaf senescence: Penultimate leaves are observed at the time of harvest for their retention of greenness and are categorized as 1) late and slow; 5) intermediate; 9)early and fast 41. Basal leaf sheath color: taken at stage (40) and are classified as:
- 060- green
 - 080- purple
 - 081- light purple
 - 084- purple lines
42. Spikelet: Sterile lemma length: Measure at post harvest stage with the following category:
- 1- short (<1.5mm)
 - 3- medium (1.6mm-2.5mm)
 - 5- Long (>2.5mm but <the lemma and palea)
 - 7- Extra-long (=or >the lemma and palea)

42. Panicle: Secondary Branching: Taken at soft dough stage to maturity stage) and with the following classification based on the secondary branches bearing the spikelets:

- 0- absent (as in *O. glaberrima*)
- 1- light
- 2- heavy
- 3- clustering (more than one spikelet originate from the same branch)...

[Drawings in separate pdf file.images irri]

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