Scoring the elongation ability of deep-water rice

M. S. Ahmed, Bangladesh Rice Research Institute; S. K. De Datta and D. HilleRisLambers, International Rice Research Institute; U. O. Kjaw, Agricultural Research Institute, Burma; Y. Ohta, University of Tsukuba, Japan; S. Subiyanto, Central Research Institute for Agriculture, Indonesia; and Nopporn Supapoj, Thailand Department of Agriculture

A standard scoring system (see table) for measuring elongation ability of deep-water rice was approved by the 1976 Deep-Water Rice Workshop. It is recommended as a replacement for that currently described in the Standard Evaluation System for Rice. It is used as follows:

1. Direct seed 5 g pregerminated seed for each 125-cm row in a wetbed nursery.

2. 0 to 30 days after seeding (DAS): Manage like lowland rice. Water depth should not exceed 10 cm.

3. 30 DAS: Estimate percent stand in each row.

4. 31 DAS: Increase water depth to 25 cm.

5. 33, 35, 37 etc. DAS: Increase water level by a maximum of 10 cm on alternate days until target depth is reached. Record scores at or near target depths of 50, 150, and 200 or more cm. As the biological check for the 50-cm target depth, use a nonelongating semidwarf. For 150 cm use T 442-57; for more than 200 cm use the best local floating variety.

NOTE: If leaves of the check variety are visible above water on the second day at any target depth, add enough water to submerge them.

6. Score the plants at the target depths. Scores should indicate water depth and elongation behavior. For example, a score of 160-5 indicates that at a 160-cm depth the entry's response was like that of T 442-57.

A standard scoring system for measuring the elongation ability of deep-water rice.

Score	Description	Biological check
0	No information	
1	Best elongation response	Best local floating variety
3	Response better than that of T 442-57, not as good as that of the best local floating variety	
5	Response equivalent to that of T 442-57	T 442-57
7	Response better than that of the nonelongating semidwarf, not as good as that of T 442-57	
9	Poorest elongation, or none	Non-elongating semidwarf

Deep water rice terminology

B. S. Vergara and H. D. Catling, International Rice Research Institute; S. M. H. Zaman, Bangladesh Rice Research Institute; and S. Saran, Agricultural Research Institute; and S. K. Datta, Chinsurah Rice Research Station, India

Scientists attending the 1976 Deep Water Rice Workshop in Thailand adopted a terminology which they recommended for use by all researchers:

1. Elongation – increase in plant length resulting from elongation of internode, leaf sheath, blade, or combinations. When necessary, specific plant parts should be designated, e.g. internode elongation.

2. Basal tillers, basal roots – tillers or roots produced from the basal nodes.

3. Nodal tillers, nodal roots – tillers or roots which arise from the nodes above the plant base. The term "nodal" is used to differentiate them from the tillers produced on the upper nodes. The term "aerial tiller" and "branches" should be discarded.

4. Kneeing – change of direction of upper plant portions from horizontal towards the vertical.

5. Designation of internodes – In the mature plants, the first internode, the internode responsible for the exsertion of the panicle, is designated as n–0; lower internodes are designated successively as n–1, n–2, n–3, n–4.

Temperature tolerance

Indonesian rice line named as variety for Philippine mountainous areas

Agapito Ronduen, Philippine Bureau of Plant Industry, and Rey Villareal, International Rice Research Institute

An early maturing line from Indonesia, Kn-1b-361-1-8-6-10, was approved as a new variety under the name RP Kn-2 by the Philippine Seed Board in April 1976. It is being multiplied by the Philippine Bureau of Plant Industry (BPI) for release to farmers in mountainous regions of the Philippines. RP Kn-2 is 90–120 cm high and resistant to lodging. It has from 10 to 13 productive tillers per plant.

RP Kn-2 was selected from more than 600 rices from 10 countries and from IRRI that were screened by the BPI and IRRI under the unusually cold conditions of the ancient lfugao rice terraces of Banaue, Philippines, through the first International Rice Cold Tolerance Nursery (IRCTN). Its early maturation should make possible the growing of two rice crops per year in the mountain provinces where only one has traditionally been grown. RP Kn-2's yields are higher than those of local varieties, especially if a moderate amount of complete fertilizer is used. In 1975 tests, they were 5.5 t/ha in the dry season and 2 t/ha during the wet season. RP Kn-2 is resistant to bacterial blight. Its eating quality is lower than that of local varieties, but as good as that of lowland varieties now imported into the Philippine mountains.

Parents of RP Kn-2 are IR8 and Jerak. Jerak is a high-elevation rice from Indonesia. Lines from the Kn 361 cross have also performed well at high elevation in other countries in the IRCTN.