

National Training Program for Rice Conservators Phase – 3

(Harvest and post harvest Phase)



On 25th Dec, 2013 the program started at 12:30 pm after arrival of expected participants. Dr. Debal Deb explained about the descriptors for harvest and post harvest stage with several examples and precautionary measures for high accuracy. Advised that all measurement of the following to be taken after maturity of grains.

A. Traits to be recorded before/at harvest:

- i. Panicle exertion - Extent to which panicle is exerted above the flag leaf sheath. Enclosed, partly exerted, just exerted, moderately exerted and well exerted are explained in detail with appropriate illustrations. (Refer the resource material)
- ii. Panicle shattering - Proper holding of panicle for noting the panicle shattering character. Participants were given practical handling experience to judge the shattering percentage such as very low, low, moderate, high and very high.
- iii. Panicle - secondary branching: Secondary branch per primary branch is explained with good illustrations to identify the appropriate character with the codes such as (condition of secondary branching) absent, sparse, dense and clustered.

After lunch all the participants were taken to field to have hands on field experience. There were many non harvested paddy varieties that were still standing in the field. Participants were explained thoroughly to understand the maturity status of the varieties by observing the grain maturation level and colouration of leaves.



B. Traits to be recorded after harvest:

- iv. Panicle length in centimeters: Panicle length to be measured between the panicle base to end of the last grain. Appropriate codes to be given.

- v. Panicle threshing ability: There are two types of tests for testing the threshing ability. One is the direct hitting method for threshing of the panicle to the hard board and second is rolling the panicle in the hands. All the participants were made to practice that in front of the expert.



Day 2 of the workshop began on time and following characters were taught.

- vi. Awn colour: The method of understanding the awn colour was explained. It was advised to take the distribution and length of the awn at this stage also. Participants had practical knowledge under the expert's supervision.
- vii. Lemma and Palea Pubescence: Different pubescence types were shown with the photographs and illustration.
- viii. Lemma: Colour of Apiculus:
- ix. Lemma and Palea colour: Colour of lemma and palea was seen with different grains and the effective printed materials were given to the participants for better understanding.
- x. Anthocyanin coloration of area below apiculus: Different colour samples of anthocyanin coloration of area below apiculus were explained with appropriate colour prints and internationally recognized codes.
- xi. Spikelet Fertility: Method of counting percentages of the effective grains of the panicle was explained.
- xii. Grain Length: The grain length to be taken as explained in the training phase-1
- xiii. Grain Width: The grain length to be taken as explained in the training phase-1
- xiv. Grain Weight: Randomly selected 100 grains of each variety were taken to measure the yield and a formula for the same was explained.

- xv. Decorticated grain length: An easy method to break the lemma and palea at the top of the grain to get the decorticated grain safely was shown. It was advised that average of minimum 10 grains to be taken.
- xvi. Decorticated grain width: Same as above.
- xvii. Endosperm type: Endosperm of the polished rice is of two types. If the rice appears waxy white, it is glutinous (with no amylose) and if it appears cloudy and translucent, it is non glutinous (containing amylose).

Practical experience session for the participants with the expert's supervision and the doubts were cleared about identifying the characters with suitable coding. In the afternoon the participants were made to weigh 100 grains of different paddy varieties. Proper methodology was explained and fine tuned the knowledge. Yield calculation methods are also explained with appropriate formula that is

$$Y \text{ (g/m}^2\text{)} = \frac{H \cdot TG \cdot GW}{100 A}$$

Y- Yield, g- gm, m- meter, H- Number of hills per unit area, TG- Total number of grains per hills, GW- Weight of 100 grains(gm), A- Area in m²



On the last day minimum essential characters required to examine the farmers' sample was explained with the appropriate reasoning. Participants were made to understand their mistakes with the practical session in which mistakes were corrected by the expert. Tasks of all the 3 phases were recapitulated in the field to resolve all the queries and doubts of the participants. The following

points were discussed for future planning:

- Importance of maintaining purity of the paddy landraces to be shared by the participants with other organizations, farmers and farmers' organizations in their respective regions.
- Scientific characterization and documentation of the landraces.
- Involve as many of the stakeholders at the grass root level in to the process.
- Exchange of data for effective knowledge production and documentation to protect the resources against bio-piracy.
- Exchange of field experiences to adapt better practices.

At the end of the session Dr. Debal Deb advised the participants to conserve the landraces with genetic purity and assured to provide guidance for scientific documentation.

Certificates were issued to the participants duly signed by Dr. Debal Deb, Chair, Basudha and Dr. Claude Alvares, Director, OFAI.

