**What are the properties of paddy that require measuring?**

1. Moisture (see measuring moisture content of rice)
2. Cracked grains
3. Grain dimensions
4. Immature grains
5. Docka
6. 1000-

**Measurem**

$$\text{Cracked grains (\%)} = \frac{\text{Cracked grains (no.)}}{\text{100 grains}} \times 100$$

**1. Crack detection**

Using the paddy crack detector, count the number of cracked grains in a 100-grain sample. Then compute the % of cracked grains using the equation:

$$\text{Cracked grains \%} = \frac{\text{Cracked grains (no.)}}{\text{100 grains}} \times 100$$

**2. Grain Dimensions**

Using the Vernier caliper or photographic enlarger, collect 20 paddy samples at random from each replicate and measure the dimensions to obtain the average length and width of the paddy grains. To obtain the paddy shape, the following equation will be used.

$$\text{Length to width ratio (L/W)} = \frac{\text{Average paddy length (mm)}}{\text{Average paddy width (mm)}}$$

**3. Immature Grains**

1. Select a 25-g grain sample.
2. Select, segregate, and weigh the immature grains in the sample
3. Calculate the percentage of immature grains in the sample using the formula:

$$\text{Immature grains \%} = \frac{\text{Weight of immature grains}}{\text{Total weight of samples}} \times 100$$

**4. Dockage**

- Remove light foreign matter, stones, weed, and seeds from a 100-g sample.
- Obtain the total weight. Then compute dockage percentage as follows:

$$\text{Dockage \%} = \frac{\text{Weight of dockage}}{\text{Total weight of sample}} \times 100$$

**1000-seed weight**

- Count and weigh 1,000 grains (paddy).

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*Rice Fact Sheet*