

Effect of grain physical properties on milling of recently recommended rice varieties in Sri Lanka.

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The physical Properties of paddy play an important role in rice processing. They are essential for designing dryers, cleaners, gravity separators and other processing machinery. Also, the milling quality and market value of rice depend on these properties, further, the physical properties are essential for breeders as a guide in their work of developing new varieties of desirable size and shape, in terms of consumer preference.

The physical properties such as length, thickness, breadth, L/B ratio, hardness, true density, bulk density, porosity and husk content were determined twelve recently recommended rice varieties widely grown in Sri Lanka. The relationship of these physical parameters to milling qualities was also studied. At a grain moisture content of 13.0+1.0% (wet basis) and at a constant bran removal of 8.0+1.0%, a significant varietal influence on total milling yield and head rice yield was observed. The total milling yield varied from 70.52% for Bg352 to 75.91% for the variety AT 05 to 71.86% for variety AT 402. The results showed that the paddy husk content is negatively correlated to total milling yield. Also the head rice yield for all varieties tested was influenced by L/B ratio.