

Development of Value Added Products from Rice Using Parboiling and Puffing Technologies

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ABSTRACT

Rice is originated from the grass species of *Oryza sativa* (Asian rice) or *Oryza glaberrima* (African rice). It is the most widely consumed staple food. The present study was carried out on parboiling and puffing characteristics and nutritive value estimation for selected bold rice varieties MTU1001 and MTU3626 in comparison with normal rice variety 7029. The results obtained for parboiling characteristics of the two varieties 1001 and 3626 showed that the alkaline spread value, head rice recovery and the percentage of broken grains of the bold varieties were significantly different when compared to normal rice variety. The total milling recovery of bold varieties was on par with normal variety. The results obtained for puffing characteristics of the two varieties 1001 and 3626 showed that significant difference existed among rice varieties in terms of puffed yield, expansion volume and expansion ratio when compared to those characteristics of puffed rice obtained from normal rice variety. The puffing characteristics were better in bold varieties when compared to normal rice variety. Using the two bold varieties selected for the study, four recipes were prepared. Pulihora and Fried rice were prepared using parboiled rice obtained from both varieties 1001 and 3626. Ugani and mixture were prepared using puffed rice obtained from both varieties 1001 and 3626. The recipes were subjected to sensory evaluation. The results of sensory evaluation showed that the recipes, Pulihora and Fried rice prepared using parboiled rice of bold varieties were acceptable on par with the recipes prepared using parboiled rice obtained from normal rice. Similarly, the recipes, Ugani and Mixture prepared using puffed rice of bold varieties were acceptable on par with the recipes prepared using puffed rice obtained from normal rice.

Keywords: *Parboiling, Puffing, Rice.*