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Evaluation of different varieties of sprouted rice to daily rice dish and assessing of their sensory qualities

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Rice is the staple food of Sri Lankans. Rice is usually consumed in the form of milled rice (MR) in which most of the nutrients are removed during milling. Although un-milled brown rice (BR) consists high levels of nutrients, it is less palatable compared to MR. Evaluation of the possibility of introducing the total nutrients which contains in the BR to daily rice dish and serving in a palatable manner were the main objectives of this study. The possibility of incorporating sprouted brown rice (SR) to MR at different proportions was experimented. Four rice varieties [two red (*At 361 / At 362*) and two white (*At 307 / At 308*)] were selected. Sprouting ability of selected rice varieties was tested at 6 hr intervals after soaking overnight. A semi-trained sensory panel was used to determine the sensory attributes of BR, MR and SR. Based on the results of the preliminary sensory test, MR and SR was mixed at different ratios for cooking. The ratio that was sensorially ordinary with the control was analyzed for the nutritional quality. The time spent for sprouting of red and white pericarp rice were 24 and 28 hrs, respectively. The scores for taste of MR and SR were significantly ($p \leq 0.05$) different from each other. The score for taste of red pericarp SR was higher than MR. MR of all varieties significantly scored for the highest appearance. The ratings for aroma on SR of all varieties were always higher than BR and MR. Overall acceptability of MR was significantly higher than BR and SR. However the overall acceptability of SR was significantly higher than the BR. The best mixing ratio of SR to MR for red and white rice were 1:6 and 1:7 respectively. Overall nutritional content including fat, protein, fiber and ash contents were moderately increased in above mixtures. These results suggested that introduction of SR to daily dish is a feasible option to increase the daily nutritional status and health of the rice consuming people.

Keywords: milled rice, pericarp, sprouted rice