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Production of sprouted rice from selected rice varieties in plastic containers

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Milled rice in which most of the outer fractions with high nutrient content (nutritional part) are removed during milling, is preferred for its palatability. Unpolished or brown rice (BR) is rich in nutrients such as fiber, iron, vitamins and minerals because of the remaining outer bran layer and recommended for consumption, but less palatable compared to milled rice. Generally, sprouting of brown rice (SR) for 48 hrs improves the palatability while having the above nutritional benefits. Reducing the sprouting time will encourage consumers to produce and consume sprouted brown rice. An experiment was conducted to evaluate the time taken to sprout BR in plastic containers. Forty, twenty and ten grams of undamaged brown rice (BR) grains from rice varieties *At 303* and *At 401* were placed in clean dry plastic containers (150 ml) separately in triplicate and filled with water at 5 am. After 2 h the water was drained and the grains were allowed to sprout in closed plastic containers. The temperature within the sprouting atmosphere was measured until sprouts appeared. Time was recorded at sprout length of 0.5 – 1 mm. A ranking method was adopted to evaluate samples by a sensory panel for the appearance of sprout length. Sprout length was measured by observing the sprout placed on 1 mm graph paper through a hand lens (5 X). The remaining air space in plastic containers filled with BR was measured in another set of the above treatments by water replacement measurements. Swollen germ started to appear in 4 h and sprouts became visible after 8 h of draining. Sprouts of *At 401* started to appear earlier than those of *At 303*. However, there were no significant differences between different contents of BR within the same variety on sprout length in 10 h. Heat developed during sprouting increased the sprouting temperature by 1.5 °C compared to the room temperature. The increase in temperature due to sprouting also did not show any difference between treatments or varieties. Volume of air space in plastic containers varied between 90 – 93 ml, 115 – 118 ml and 128 – 131 ml in 40 g, 20 g and 10 g treatments respectively, of both varieties. Air space or space occupied by BR had no influence on sprouting rate of the two varieties. Time taken for sprouting after soaking and draining off water was different in the two varieties. Weight of soaked BR in 150 ml closed plastic containers had no influence on its sprouting rate. Even with less free space no difference was observed in temperature increment. Further experiments in larger containers including more varieties are suggested.