

Comparative Study on Nutrient Composition of Various Methods of Parboiled and Non-Parboiled Rice from Sri Lanka

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Rice is the major food crop in the world. In Sri Lanka rice is a staple food crop consumed two to three times per day by our people. It is a vital procedure to identify the nutritional level of rice as it is being consumed parboiled or non-parboiled rice. This study investigated the effects of various parboiling treatments on the nutrient composition of rice. Currently popularized two Sri Lankan rice varieties, short white pericarp (Bg 360) and medium red pericarp (Bg 406) were selected for this study. The above pure varieties were obtained from plant genetic resources centre (PGRC) Kandy. Cleaned paddy was utilized and air dried up to $12 \pm 0.1\%$ moisture content in conducting experiment. Nutrient contents of non-parboiled rice and parboiled rice were compared in four various methods namely traditional parboiling (TP), pressure parboiling (PP), central food technological research institute parboiling (CFTRIP) and dehusked rice parboiling (DRP). The significant differences due to parboiling method and rice varieties were determined by factor factorial experiment. Changes in nutrient composition were dependent on the parboiling method. Parboiling rice was more effective in nutrients compare to non-parboiled rice. Parboiling improves availability of protein, fat and ash content. The increment of protein content was shown on parboiled rice by DRP method indicating 8.5% and 7.6% in Bg 406 and Bg 360 varieties respectively. Parboiled rice is indicating better nutritional value than non parboiled rice.

Keywords: Rice varieties, Parboiling, Nutrient composition