



Effect of Processing on the Nutritional Quality of Red Rice Cultivars

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ABSTRACT Red rice also known as “weedy rice” is the species of rice (*oryza*). It is low yielding rice variety with red pericarp, which is an unmilled variety with nutty flavor. Rice with a red bran layer is called red rice. In the present study an attempt was made to see the effect of dehulling and milling on the physical and nutritional quality of red rice cultivars. Five cultivars of red rice viz *Sukara*, *Roda dhan*, *Desi dhan*, *Jatto* and *Chohatto* were procured and were analyzed for their physical and nutritional quality after processing that is dehulling and milling. Physical characteristics analyzed were color, size density and bulk density. For nutritional quality evaluation these samples were analyzed for their proximate composition, starch, total carbohydrates, calorific value, non- protein nitrogen (NPN), true protein, free fatty acids and free amino acid content by using standard methods. Results revealed that rice recovery of dehulled rice was higher as compared to milled rice. Husk recovery and broken rice recovery was on the contrary higher after milling as compared to dehulling. The milling of red rice cultivars showed a significant ($p \leq 0.05$) decrease in grain size and proximate composition whereas density, bulk density, total carbohydrates and starch content increased. The minimum NPN content was in milled grains and maximum was in dehulled rice grains. Milling resulted in a decrease in true protein, free fatty acid and free amino acid content significantly ($P \leq 0.05$). Dehulling is a better processing technique for retaining the nutrients in red rice cultivars as compared to milling.