

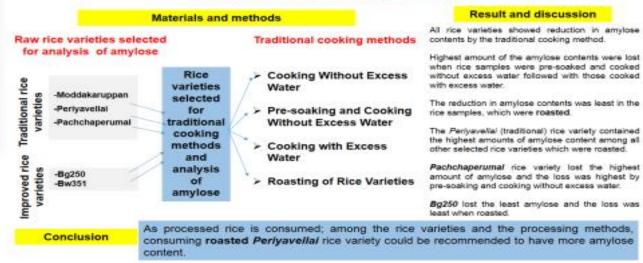
Comparison of amylose content of selected paddy varieties (Oryza sativa L.) in Sri Lanka against different cooking conditions

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Amylose contents of starchy foods are considered to possess several effects on healthy life. Amylose content in different varieties of rice and the effect of different traditional methods of processing on amylose content were determined. To study the effects of different processing methods on amylose contents, five commonly consumed rice varieties (two improved (Bg250 and Bw351) and three traditional varieties (Periyavellai, Pachchaperunal, and Moddakaruppan)) were selected, the rice samples were processed by roasting, cooking with draining of excess water, cooking without draining water, and cooking the pre-soaked rice & cooking without draining water. Each treatment was replicated three times. The mean amylose contents obtained after the different cooking methods, which are applied to different rice varieties, showed a significant difference (P<0.05). The highest mean amylose content was observed in rice varieties which were in raw form followed by roasted rice varieties. The lowest mean amylose content was observed in rice varieties in which were presoaked and cooked without excess water. The Periyavellai (traditional) rice variety contained the highest amounts of amylose content among all other selected rice varieties. The results showed that cooking methods have an effect on amylose contents. Different processing methods have significantly reduced the amylose contents. As processed rice is consumed; among the rice varieties and the processing methods, consuming roasted Periyavellai rice variety could be recommended to have more amylose contents.

Keywords: amylose content, improved rice varieties, traditional rice varieties, traditional cooking methods