

FLAVOUR ENRICHMENT OF LOCALLY AVAILABLE NON-AROMATIC SAMBA RICE

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Flavour enriched rice, a growing interest in the current research arena, has not been introduced to the local market. The objective of the present study was to determine the possibility of flavour enrichment into local rice grains. BG 358, a non-aromatic rice variety having a higher demand in the local market was selected for the study. Brown, polished and rough rice of BG 358 were used and samples were treated with four flavoring agents (cinnamon, cardamom, clove and lemon grass) with two application methods (soaking and spraying). A trial and error method was used to determine the concentrations of flavours on weight basis as a ratio of water: oil (C_1 -199:1, C_2 -59:1, C_3 -29:1). The hardness and moisture content were measured to evaluate the physical properties, while a sensory analysis was carried out to evaluate the colour, texture, taste, aroma and the overall acceptability of flavour enriched rice. Parametric data were analyzed by ANOVA using SAS and sensory data were analyzed by Friedman test in MINITAB. The significant difference was declared at $p < 0.05$. Among rough, polished and brown rice that were soaked, the highest ranks were observed in C_1 , C_1 , C_3 , C_2 and C_1 , C_3 , C_3 , C_1 and C_1 , C_3 , C_3 , C_1 concentrations for cinnamon, cardamom, clove and lemon grass, respectively. In soaking, cardamom showed the best flavour attribute for rough rice while lemon grass had the best flavour enrichment for polished and brown rice. In the spraying, clove was the best flavour enrichment for brown and polished rice. Parametric data analysis showed that there is an interaction ($p < 0.05$) among rice types, flavours and concentrations. Spraying method had the highest mean average for hardness (10.70N) and lowest mean average for moisture (14.34%) (Standard value=14%), thus being the best method, compared to soaking. It can be concluded that spraying is the best method of making flavour enriched rice. Further, clove is the best flavour for spraying while, cardamom and lemon are best flavours for soaking.

Keywords: Flavouring solution, Rice, Soaking, Spraying