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SENSORY EVALUATION OF TRADITIONAL BREAKFAST FOOD SUBSTITUTED WITH SOY FLOUR AND RED RICE FLOUR

**M. P. M. S. H. Perera¹, R. Sivakanesan², D. T. D. J. Abeysekera³,
K. H. Sarananda⁴**

¹*Post Graduate Institute of Agriculture, University of Peradeniya*

²*Department of Biochemistry, Faculty of Medicine, University of Peradeniya*

³*Lakeside Adventist Hospital, Kandy*

⁴*Agriculture Enterprises Development Information Services,
Department of Agriculture, Peradeniya*

Soybean (*Glycine max*) is rich in proteins, fibers, polyunsaturated fats, isoflavons, calcium, iron, phosphorus and most of the vitamins. Quality and bioavailability of soya protein are comparable to animal protein and its digestibility is high. Soy consumption has been reported to moderately improve plasma lipid profile and hyperglycemia among diabetics. Therefore this research was conducted to evaluate the sensory attributes and overall acceptability of breakfast food items prepared by substituting wheat flour with soy flour and red raw rice flour and soy extract with a view to replace the habitual diet of type 2 diabetics, since diabetes affects a significant proportion of our population. The sensory evaluation was the initial phase of our study with the above mentioned objective and to assess the benefit of such food items.

Soy bean seeds were sorted and boiled for 20 minutes. Seeds were dried and milled into flour and stored at 4⁰C. Soy based food items were prepared by substituting wheat flour in the traditional recipes with soy flour and red raw rice flour in a ratio of 1:4. Food items were prepared according to the traditional methods and subjected to sensory evaluation (5 point hedonic scale) by a trained sensory panel at the Food Research Unit, Gannoruwa. The data was analyzed by using non parametric Kruscal Wallis test (SPSS version 14.0). Traditionally wheat flour and red rice flour are used to prepare breakfast food. Hence the food items are referred to as soy food in this study.

Soy rotti, soy thosai and soy yoghurt were accepted readily, (without any dislike) while soy hoppers, soy wandu, soy milk and soy pittu were accepted by all except by one evaluator. Soy kolakenda and soy string hoppers were rejected. The mean acceptability rank was highest (45.79) for soy milk. The mean rank of yoghurt and thosai were 42.28 and 42.19 respectively. Least mean rank was 20.76 for kolakenda and for string hoppers it was 23.18. The overall acceptability of texture, flavor and color of soy rotti, soy thosai, soy yoghurt, soy wandu, soy hoppers and soy milk is good compared to soy kolakenda and soy string hoppers.

The finding of this research revealed that, rotti, thosai, hoppers, wandu, and pittu prepared with soy flour and red raw rice flour combination were with acceptable sensory qualities. Further the yoghurt and milk prepared with soy extract as the ingredient were also with acceptable sensory qualities. Therefore, these breakfast food items could be substituted with soy successfully.