

Production and Evaluation of Cereal-Legume Based Infant Porridge Formulations

S Ragupriya^{1*} and T Mahendran²

ABSTRACT. Dietary quality is an important limiting factor to adequate nutrition of infants in many developing countries. Supplementation of cereal flour with inexpensive legumes helps in improving the nutritional quality of cereal products. Seven types of blends were formulated in different proportions using 60% of red rice and 40% of pulses such as; black gram, green gram and cowpea. Pre-gelatinized rice was added to enhance the deliciousness of the developed product. Roasting process was carried out in order to produce the products with lower moisture content (3.5%) and to extend the shelf life. Moisture content was noted to be high in green gram added blends compared to others. The use of pulses as a fortifying agent effectively increased the protein content of the blends. Contents of fat, sugar, fibre and the level of mineral for the blends were also within the acceptable levels. There were significant differences ($P < 0.05$) between treatments in nutritional and sensory qualities. The formula with red rice (60%), black gram (20%) and green gram (20%) combination was selected as the best blend. Based on the Tukey's experiment, higher hedonic scores were obtained for colour, aroma, taste and absence of off-flavour for this treatment. The characteristic nutty flavor of black gram and green gram, which were produced from roasting, was accepted by the sensory panel. In contrast, cowpea added blend resulted in lower scores. Based on standard nutritional and sensory values, a combination of either rice with green gram and black gram could be recommended as appropriate cereal-based porridge mixture for infants.

Key words: Legumes, Nutritional Quality, Porridge Mixture, Pre-gelatinized Rice, Roasting.

* To whom correspondence should be addressed : ragupriyashan@gmail.com

¹ Department of Agricultural Chemistry, Faculty of Agriculture, Eastern University

² Department of Agricultural Chemistry, Faculty of Agriculture, Eastern University