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Consumers’ preferences and willingness to pay for nutrient-dense, shelf-stable pigeon pea-based noodles for sustainable consumption

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Abstract

The study aimed to assess consumer willingness to pay, perceived value, and drivers for their buying decision. A total of 107 consumers residing in different locations in Rungwa and Nachingwea districts in the Lindi region, Tanzania were involved. Structured questionnaire was used to collect the information. The profile of the developed product and specification of each attribute was described to consumers before evaluating the attributes and rating their choice on a 5-point scale as well as proposing the price will pay. Data were analysed using SPSS, mean and standard deviations were used to summarise age and the proposed price. Frequencies were used to summarise preference ratings, buying interest, and driver for their choice. A Chi-square test was used to determine the relationship between consumer characteristics and samples. Logit regression analysis was used to determine predictors for willingness to pay for the developed pigeon pea-based product (PPBN). Average age was 38.79 ± 11.9 (SD) years, expenditure was $13,625 \pm 1653.8$ (SD) Tshs/week and $25,176 \pm 5485.8$ (SD) Tshs/week during harvesting and lean season respectively. About 78 % of consumers were married, 64 % had primary education, 69 % were farmers, and 53 % prefer sample PPBN193. There was no significant difference in choosing the sample among the age group, sex, marital status, education, source of income, and amount of money spent per week at $p < 0.05$. Colour, taste, and aroma of noodle for both samples was perceived to be good with differences in mouthfeel among samples. About 86 % of consumers are willing to buy developed PPBN at a price of 1633.64 ± 593.32 (SD)Tshs for 500g. The Hosmer and Lemeshow 2 test of 8.082, with p-value =0. 426 indicated that the data fit well in the model. The Nagelkerke R² explained 35 % variability in willingness to pay for the developed products. Expenditure per day, package size, and price significantly contributed to the model. Availability of preferred and acceptable nutrient-dense shelf-stable food products, at an affordable price, will make the food available to all people at all times for sustainable consumption. This will contribute to the reduction of global challenges on food and nutrition security.

Keywords: Consumers’ preferences, perceived value, pigeon pea-based noodles, willingness to pay