

The Development of Innovative Culinary Dishes Using Cowpea (*Vigna Inguiculata*) as the Star Ingredient

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Abstract

Africa is home to various indigenous food crops, including pulses, nuts, cereals, fruit, and vegetables, which contain essential nutrients and contribute to healthy and productive lives. These crops are not only nutritious, but some types have the added benefit of being more tolerant to drought and resistant to pests and disease than their exotic counterparts. However, indigenous food consumption has declined considerably despite their potential role in enhancing the quality of diets and meeting nutrient requirements for urban and peri-urban areas with high malnutrition rates. Some consumers associate these crops with poverty and low self-esteem labelling them as “poor people's food”. Cowpea, also called black-eyed pea, is a highly nutritious indigenous legume in Africa that suffers the same label. The study aimed to develop four innovative culinary products highlighting the use of cowpea as a food ingredient. The study also served an academic purpose as part of a Recipe Development module for university students.

The experimental process started with a project brief to students, which clarified the scope. The brief was to develop four recipes using cowpea as the main ingredient. 1) A high-protein snack for high-income groups, 2) and 3) two dishes of fine dining restaurant quality with an infusion of African flavours, and 4) a high-protein meal for feeding scholars in low-income communities. The latter meal had to be nutrient-rich, have sensory appeal, use inexpensive ingredients, and incorporate African flavours and cooking methods. The search and presentation of recipe ideas followed, and then appropriate recipe ideas were selected. A series of recipe adaptations were carried out by manipulating e.g., cooking temperature, time, preparation techniques, and proportions of ingredients. The recipes were optimised using sensory evaluation to evaluate the recipes' appearance, aroma, texture, flavour, and overall appeal.

Four innovative culinary products, cowpea bunny chow, cowpea gnocchi with morogo pesto, cowpea chai ice cream, and cowpea vetkoek with cowpea filling, were successfully developed and received a favourable evaluation from the taste panel for being appealing to consumers. The results confirm the need to use indigenous food crops to create exciting recipes to help change consumers' perceptions of these crops.