

Jackfruit Seed as Flour Alternative in Cookies: A Consumer Acceptability Study

ABSTRACT

This study investigates the feasibility of utilizing jackfruit seeds as a sustainable replacement for wheat in bakery products to mitigate the escalating costs of wheat. Jackfruit seeds, an often-overlooked resource, constitute approximately 10-15% of the fruit's weight and are typically discarded due to their perishable nature. Despite their historical neglect, these seeds are rich in nutrients, making them an economical and attractive alternative to wheat in light of the rising wheat prices. The primary focus of this study revolves around the development of Jackfruit Seed Flour (JSF) and its application in cookie manufacturing. Two distinct approaches are examined: the complete substitution of wheat flour with JSF (V1) and the use of varying ratios of jackfruit seed flour to wheat flour in cookies, specifically V2 (50% JSF) and V3 (25% JSF). These formulations are compared to a control sample comprising 100% wheat flour cookies. Furthermore, a comprehensive sensory evaluation, encompassing both descriptive and hedonic assessments, is conducted to evaluate shelf life and consumer acceptability. Descriptive sensory analysis of all JSF cookies over a 15-day period at room temperature suggests that V3 cookies maintain their quality over time, comparable to the control sample. In contrast, the hedonic sensory test conducted with a panel of 30 randomly selected individuals reveals that V3 is the most preferred option in terms of overall acceptability, followed by V2, and then the control sample. V1 is rated as neutral in terms of overall acceptability. In conclusion, the combination of JSF with wheat flour shows significant potential for cookie production. The use of JSF in cookies not only reduces waste from jackfruit seeds but also contributes to cost savings in the production of baked goods. This study highlights the viability of utilizing jackfruit seeds as a valuable resource in addressing the challenges posed by the rising cost of wheat in the bakery industry.