



**EFFECTS OF THE POST-FLOWERING TIMELINES ON THE NUTRITION, PHYTOCHEMICAL COMPOUNDS AND ANTIOXIDANT ACTIVITIES OF JACKFRUIT (*ARTOCARPUS HETEROPHYLLUS* LAM.)**

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**ABSTRACT**

The nutrition, phytochemical compounds, and antioxidant activity of jackfruit (*Artocarpus heterophyllus* Lam.) are affected by the post-flowering timelines. Therefore, selection of appropriate harvest timing is an important factor to reduce the post-harvest losses. The objective of this study was to determine the nutritional, chemical, and antioxidant activity changes of jackfruit parts (e.g. pulp, fiber, and seed) collected from the top, middle, and bottom of the fruit at 3 different times after flowering (100 days, 110 days, and 120 days). Jackfruit parts were extracted from ethanol solvent before analysis. Results have shown that the seeds contained a high amount of starch ( $10.6 \pm 0.07\%$  -  $14.86 \pm 0.03\%$ ), while the sugar, total acidity (TA) and total soluble solids (TSS) are absent. The antioxidant activity was determined by three free radical scavenging methods ABTS<sup>•+</sup>, DPPH<sup>•</sup>, and phosphomolybdenum (TAC) method. At 120 days at the top of jackfruit, the highest total sugar and TSS content were  $79.48 \pm 2.8$  (mg/gDM) and  $25.25 \pm 0.35\%$  in jackfruit pulp, respectively, the highest TA content was  $0.36 \pm 0.02\%$  in jackfruit fiber, the highest protein, ash and fat content in jackfruit seeds were obtained at  $4.43 \pm 0.01\%$ ,  $1.12 \pm 0.03\%$ ,  $3.22 \pm 0.01\%$ , respectively. The highest carbohydrate content and pH in the jackfruit pulp at the end of the fruit at 110 days were  $26.18\%$ ,  $6.63 \pm 0.03$ , respectively. The highest fiber content in jackfruit seeds at the end of the fruit at 100 days was  $19.7 \pm 0.12$ .