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PROXIMATE COMPOSITION AND BIOCHEMICAL CONSTITUENTS IN DIFFERENT STAGES OF *PARKIA ROXBURGHII* PODS UNDER DIFFERENT AGRO-CLIMATIC ZONES OF MANIPUR

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ABSTRACT

Different stages of Parkia roxburghii pods grown in different agro-climatic zones were analyzed for their biochemical composition. Higher content of vitamin C was recorded in the tender stage of the pod in all the agro-climatic zones, highest being recorded in the Temperate sub-alpine zone (60.8mg/100g) followed by Sub-tropical hill zone and Sub-tropical plain zone. Highest protein content was recorded in Temperate sub-alpine zone (19.68%), while the minimum content being found in Mild-tropical hill zone (15.5%). Protein content in Parkia pods differed significantly (P<0.01) in different stages and in different agro-climatic zones. Oil content in all the agro-climatic zones increased gradually from tender stage to the mature stage of the pod. However, no significant difference in oil content was observed among the agro-climatic zones. Crude fiber differed significantly in different zones and different stages of the pod (P<0.01). Higher range in crude fiber in the pods was recorded in Mild-tropical hill zone (12-23%), while the minimum range being found in Temperate sub-alpine zone (7.85-15.80%). Crude carbohydrates in the pods ranged from 58.02 to 69.04%, while it ranged from 48.61-50.0% in the seeds. Calorific value was higher in the seeds ranging from 437.25-448.90 kJ/100g than the pods. However, no significant differences were observed in crude fat, crude carbohydrate, total ash and gross energy (GE) in different agro-climatic zones. Values of Free amino acids, starch, total soluble phenols, orthodihydric phenols and bound phenols were not significantly differed among the four agro-climatic zones, however, TSAZ recorded significantly (P>0.01) higher values of total soluble sugars (4186.57mg/100g) and tannins (2909.20mg/100g) from the rest of the zones.

KEYWORDS: P. Roxburghii, Biochemicals, Proximate Composition, Gross Energy, Phenolics

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