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**Nutritive Quality of Blends of Sprouted Corn with Germinated,
Fermented and Dried Jackbean (*Canavalia ensiformis*), *Mucuna
vulgaris*, Pigeon Pea (*Cajanus cajan*) and ‘akidi’**

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Abstract

Legumes have been found to be an important source of protein in human and animal nutrition. The usefulness of most legumes is limited by the antinutritional factors that curtail their nutritional utilisation. However, various workers have reported the possibility of total or partial elimination of the deleterious effects by various processing methods. This study was carried out to evaluate the protein quality of four legumes namely, Jackbean (*Canavalia ensiformis*), *Mucuna vulgaris*, Pigeon pea (*Cajanus cajan*) and ‘Akidi’ processed under previously determined optimum conditions of germination, fermentation and drying. Forty-(40) (130–250g) albino rats were divided into eight groups of five rats each. The rats were weighed and housed in individual well labeled metabolic cages. Five rats of each group were assigned to a diet formulated from the blends of processed legumes and sprouted corn. The diets were formulated to provide 1.6gN/100g diet daily for the entire study period. The recorded feed intakes were used to estimate Nitrogen Intake and Nitrogen balance of the rats. There were no significant differences in the maintenance weight of the rats at $p > 0.05$. The rats fed diets from *Cajanus cajan* ate more than others (63.29g) while the least intake (37.50g) was observed for the rats fed *Mucuna* diets. The highest Biological value (88 %) and Net Protein Utilisation (NPU) (83 %) were observed in rats fed diets from *Cajanus cajan* and these were significantly different ($p < 0.05$) from that of *Mucuna* blends (40 %, 37 %) for BV and NPU respectively. It could be concluded from the study that the blends from the tested legumes with the exception of *Mucuna* gave diet of high quality with *Cajanus cajan* standing out to be more superior

Keywords: Animal studies, legumes, nutritive value