

***Evaluation Of Physical Properties Of Crackers Based On Lamtoro
(Leucaena Leucocephala) and Gamal (Gliricidia Sepium)***

Guided by Nur Muhamad, S.Pt., M.Sc.

Mohammad Raihan Al Khaidar
*Animal Feed Technology Study Program
Departement of Animal Science*

ABSTRACT

Crackers are solid feed molded in a certain shape so that it is easier to handle, store, and give to livestock. This study aims to evaluate the physical properties of animal feed crackers based on lamtoro leaves (Leucaena leucocephala) and gamal leaves (Gliricidia sepium) as local-based alternative feed ingredients. This study was conducted from July to November 2024. The location of the study was at the Animal Feed Technology Laboratory, this study used a Completely Randomized Design (CRD) with three treatments, namely P1 (lamtoro leaves 56%), P2 (gamal leaves 56%), and P3 (lamtoro leaves 28% + gamal leaves 28%), each with six replications. The data obtained were analyzed by Analysis of variance (ANOVA) according to a Completely Randomized Design in One-Way Pattern. If there is a significant difference ($P < 0.05$) then continued with further testing using Duncan's Multiple Range Test (DMRT) using SPSS 23.0 software. The parameters observed include density, specific gravity, and hardness of the crackers. The results showed that the treatments significantly affected all tested physical parameters. Crackers made from gamal leaves (P2) showed the highest hardness and density values, while those made from lamtoro leaves (P1) produced the highest specific gravity. The combination of the two (P3) produced a more balanced physical result. The conclusion of this study is that the use of lamtoro and gamal leaves in cracker formulations has the potential to be used as a physically efficient alternative feed for ruminants and is feasible for development in a locally sourced feed system.

Keywords: *alternative feed, feed crackers, gamal, lamtoro, physical properties.*