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The Nutritive Value of Fermented Sago Pith (Metroxylon sago Rottb) Enriched with Micro Nutrients for Poultry Feed

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Abstract : An experiment was conducted to improve the nutrient value of sago pith (Metroxylon sago Rottb) supplemented with Zn, Sulfur and urea through fermentation by using cellulolytic bacteria (Bacillus amyloliquefaciens) as inoculums. The experiment was determination of the optimum dose combination (dosage of Zn, S and urea) for sago pith fermentation based on nutrient quality and quantity of these fermented products. The study was conducted in experimental method, using the completely randomized design in factorial with 3 treatments consist of: factor A (Dose of urea: A1 = 2.0%, A2 = 3.0%), factor B (Dose of S: B1 = 0.2%, B2 = 0.4%) and factor C (Dose of Zn: C1 = 0.0025%, C2 = 0.005%). Results of study showed that optimum condition for fermentation process of sago pith with B. amyloliquefaciens caused a change of nutrient content was obtained at urea (3%), S (0,2%), and Zn (0,0025%). This fermentation process was able to increase amino acid average, reduce crude fiber content by 67% and increase crude protein by 433%, which made the nutritional value of the product based on dry matter was 18.22% crude protein, 12.42% crude fiber, 2525 Kcal/kg metabolic energy and 65.73% nitrogen retention.

Keywords : fermentation, sago pith, sulfur, Zn, urea, Bacillus amyloliquefaciens
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