

Optimization on Fermentation Process of Protein Concentrate of Jatropha Seed Cake with N Sources and Minerals Supplementation

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Abstract	<p>The objective of this research is to produce alternative food sources of protein by optimizing the potential of jatropha curcas which is agroindustry waste. This study is planned in two years and is a series of jatropha seed exploration through fermentation using <i>Lactobacillus acidophilus</i>. Specific targets in the first year of study were to assess the optimization of the fermentation process by supplementing the source of N soybean meal and fish meal. Experiments using Completely Randomized Design (RAL) factorial pattern with first factor was supplementation (F) and second factor was incubation time (W), fermentation optimization consisted of: F1 (F0 + 2.5% soybean meal flour), F2 (F0 + 2.5% fish meal), F3 (F1 + 0.45% Dicalcium Phosphat) and F4 (F2 + 0.45% Dicalcium Phosphat). The incubation time is differentiated W1: 3 days, W2: 5 days and W3: 7 days. It can be concluded that: dry matter, gross energy, calcium and phosphor are influenced by interaction between type of supplementation of source of N + DCP with fermentation time, whereas fat content is only influenced by fermentation time with optimal time decrease of fat content is 5,92 days. Total protein and amino acid levels are only influenced by different types of supplementation. Phorbol ester antinutrition levels are influenced by the duration of the fermentation. Based on antinutritive as a limiting factor. F4W5 is the best treatment and can be used as a feed ingredient.</p>
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