

ABSTRACT

EFFECT OF FERMENTED MIXTURE OF CASSAVA LEAVES AND RICE STRAW ON DRY MATTER, ORGANIC MATTER, AND CRUDE PROTEIN DIGESTIBILITY IN VITRO

By

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This research aim to knowed the effect addition of cassava leaves and rice straw fermentation on dry matter, organic matter and crude protein digestibility in vitro. This research used Completely Randomized Design four treatments (P1 = rice straw fermentation +10% cassava leaves fermentation; P2 = rice straw fermentation + 20% cassava leaves fermentation; P3 = rice straw fermentation + 30% leaves cassava fermentation; P4 = rice straw fermentation + 40% leaves cassava fermentation) with three replications. The obtained datas were analyzed by analysis of variance on 5% and or 1% significant level, than if the results significantly difference, it was analyzed with Polynomial Orthogonal Test. The results showed that there are interaction significantly effect ($P < 0,01$) between the addition of cassava leaves to dry matter digestibility, organic matter digestibility, and crude protein digestibility in vitro. There is a linear relationship between the addition of cassava leaves to dry matter digestibility is $Y = 39,14 + 0,1624X$ ($R^2 = 0,89$) with the highest average result of treatment P4 (45,57%) and the lowest P1 (40,71%). There is a linear relationship between the addition of cassava leaves to the organic matter digestibility that is $Y = 40,84 + 0,2127X$ ($R^2 = 0,82$) with the highest average result of P4 (48,82%) and the lowest of P1 (42,56%). While in protein digestibility there is a quadratic relationship that is $Y = -7,8702 + 3,5358X - 0,0652X^2$ ($R^2 = 0,87$) with the highest average result of P2 (41,78%) and the lowest of P1 (21,98%).

Keywords: Cassava leaves, Fermentation, Rice straw, In vitro digestibility

ABSTRAK

PENGARUH FERMENTASI CAMPURAN DAUN UBI KAYU DAN JERAMI PADI TERHADAP KECERNAAN BAHAN KERING, BAHAN ORGANIK, DAN PROTEIN KASAR SECARA *IN VITRO*

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Penelitian ini bertujuan untuk mengetahui pengaruh campuran fermentasi daun ubi kayu dan jerami padi terhadap pencernaan bahan kering, bahan organik, dan protein kasar secara *in vitro*. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) 4 perlakuan (P1= fermentasi jerami padi +10 % fermentasi daun ubi kayu; P2 = fermentasi jerami padi + 20% fermentasi daun ubi kayu; P3= fermentasi jerami padi + 30% fermentasi daun ubi kayu; P4 = fermentasi jerami padi + 40% fermentasi daun ubi kayu) dengan 3 ulangan. Data yang diperoleh dianalisis menggunakan analisis ragam pada taraf nyata 5% dan atau 1%, hasil analisis yang berbeda nyata di uji lanjut menggunakan uji *Polinomial Orthogonal*. Hasil penelitian menunjukkan bahwa terdapat pengaruh sangat nyata ($P < 0.01$) antara penambahan daun ubi kayu terhadap pencernaan bahan kering, pencernaan bahan organik, dan pencernaan protein kasar secara *in vitro*. Terdapat hubungan linear antara penambahan daun ubi kayu terhadap pencernaan bahan kering yaitu $Y = 39.14 + 0.1624X$ ($r = 0,94$) dengan hasil rata-rata tertinggi perlakuan P4 (45,57%) dan terendah P1 (40,71%). Terdapat hubungan linear antara penambahan daun ubi kayu terhadap pencernaan bahan organik yaitu $Y = 40,84 + 0.2127X$ ($r = 0,91$) dengan hasil rata-rata tertinggi P4 (48,82%) dan terendah P1 (42,56%). Sedangkan pada pencernaan protein terdapat hubungan kuadratik yaitu $Y = -7,8702 + 3.5358 X - 0.0652 X^2$ ($r = 0,94$) dengan hasil rata-rata tertinggi P2 (41,78%) dan terendah P1 (21,98%).

Kata kunci : Daun ubi kayu, Fermentasi, Jerami padi, Kecernaan *in vitro*