

Quality Evaluation of Complete Feed with Ramie Waste Added With Different Protein Source in Nutrient Composition and Ensilage Parameter

Title	Quality Evaluation of Complete Feed with Ramie Waste Added With Different Protein Source in Nutrient Composition and Ensilage Parameter
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Abstract	<p>Abstract. The objective of this research was to evaluate the effect of ensilage technology (with and without ensilage) and protein sources (plant and animal) in complete feed with ramie-waste on nutrient composition and ensilage parameter. Ensilage process decreased significantly dry matter (DM), organic matter (OM) and neutral detergent fiber (NDF), but it increased ensilage parameter i.e. acetate acid (C2), propionic acid (C3), butyric acid (C4), lactic acid (LA), and decreased pH. It also had non-significant effect on crude fibre (CP), acid detergent fiber (ADF) and ammonia (NH₃-N). Animal protein source in silage making decreased nutrient composition i.e. OM and CP and ensilage parameter i.e. C2, but it increased NH₃-N. Interaction between ensilage treatment and protein sources affected CP and pH also ensilage parameter of C2 and C3. In conclusion, plant protein used in silage of complete feed with ramie waste was better than animal protein, despite that both ensilage were not better due to pH over 4.5. Key words: ramie, ensilage technology, protein source, nutrient composition, ensilage parameter</p> <p>Abstrak. Penelitian ini bertujuan mengevaluasi pengaruh teknologi ensilage (dengan dan tanpa ensilage) dan sumber protein (nabati dan hewani) pada complete feed menggunakan limbah rami terhadap komposisi nutrisi dan parameter ensilage. Perlakuan teknologi ensilage menurunkan komposisi nutrisi pada bahan kering (BK), bahan organik (BO) dan neutral detergent fiber (NDF), meningkatkan kuantitas parameter ensilage pada asam asetat (C2), asam propionat (C3), asam butirat (C4) dan asam laktat (LA) dan menurunkan pH serta tidak nyata pada protein kasar (PK), acid detergent fiber (ADF) dan ammonia (NH₃-N). Perlakuan sumber protein menurunkan nutrisi BO dan PK dan C2 serta meningkatkan konsentrasi NH₃-N secara sangat nyata pada complete feed dengan protein hewani. Interaksi kedua perlakuan berpengaruh pada PK dan pH serta C2 dan C3. Kesimpulannya adalah penggunaan protein nabati pada silage complete feed menggunakan limbah rami lebih baik dari pada yang menggunakan protein hewani meskipun kedua jenis silage tidak lebih baik karena pH lebih dari 4,5. Kata kunci: rami, teknologi ensilage, sumber protein, komposisi nutrisi, parameter ensilage</p>
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