

**KUALITAS PUPUK ORGANIK CAIR URIN SAPI POTONG  
DENGAN PENAMBAHAN STARTER YANG BERBEDA  
DI KELOMPOK TERNAK MERGO ANDINI MAKMUR  
SEYEGAN, KABUPATEN SLEMAN**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan EM4, Petroganik, dan starter lokal buah Maja terhadap kualitas fisik, kimia, dan mikrobiologis pupuk organik cair urin sapi potong. Penelitian dilakukan dengan memberikan berbagai perlakuan terhadap urin sapi potong. Perlakuan pertama (P1) diberi tambahan starter *Effective microorganism 4 (EM4)* 1%. Perlakuan kedua (P2) diberi tambahan starter lokal buah maja 1%. Perlakuan ketiga (P3) diberi tambahan starter Petroganik 1%. Masing-masing perlakuan kemudian difermentasi secara aerob selama 14 hari. Kualitas fisik pupuk organik cair meliputi warna, bau, pH, suhu, dan volume. Kualitas kimia pupuk organik cair meliputi kadar N total, P total, K total, dan C organik total, serta kualitas mikrobiologis pupuk organik cair. Analisis data terhadap data hasil penelitian dengan menggunakan analisis Rancangan Acak Lengkap Pola Searah. Hasil analisis parameter fisik pupuk organik cair perlakuan P1, P2 dan P3 tidak ada perbedaan nyata. Pupuk organik cair berwarna coklat kekuningan dengan bau tidak menyengat. Hasil analisis kadar C-organik perlakuan P1, P2, dan P3 berturut-turut yakni, 1,68%, 1,92% dan 2%, sedangkan kadar nitrogen (N) berturut-turut yakni 0,14%, 0,17% dan 0,22%. Rasio C/N masing-masing perlakuan P1, P2 dan P3 yakni 12,20, 11,52 dan 9,36, sedangkan kadar fosfor (P) masing-masing 12,52%, 9,10% dan 7,44%. Hasil analisis kadar kalium (K) P1, P2, dan P3 berturut-turut yakni 2,19%, 2,09% dan 1,87%. Hasil parameter mikrobiologis diketahui jumlah koloni pupuk organik cair perlakuan P1, P2, dan P3 berturut-turut yakni,  $3,6 \times 10^4$  cfu/ml,  $5,5 \times 10^4$  cfu/ml, dan  $8 \times 10^4$  cfu/ml. Penambahan jenis starter yang berbeda tidak menghasilkan perbedaan nyata terhadap kualitas pupuk organik cair yang dihasilkan meliputi parameter fisik, kimia dan mikrobiologis.

(Kata kunci: Pupuk organik cair, urin sapi potong, *EM4*, buah maja, dan Petroganik,)

**QUALITY OF LIQUID FERTILIZER BEEF CATTLE  
WITH THE ADDITION OF DIFFERENT STARTERS  
AT MERGO ANDINI MAKMUR FARMER GROUP  
SEYEGAN, DISTRICT OF SLEMAN**

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**ABSTRACT**

This study aims to determine the effect of adding EM4, Petroganic, and Maja's local starter on the quality of physical, chemical, and microbiological liquid organic fertilizer of beef cattle urine. The study was conducted by providing various treatments for the urine of beef cattle. The first treatment (P1) was given an additional Effective Microorganism-4 (EM4) 1% starter. The second treatment (P2) is given an local starter of 1% maja fruit. The third treatment (P3) was given an additional 1% Petrochemical starter. Each treatment was then fermented aerobic for 14 days. The physical quality of liquid organic fertilizers includes color, odor, pH, temperature and volume. The chemical quality of liquid organic fertilizer includes total N, total P, total K, and total C-organic and microbiological qualities of liquid organic fertilizer. Analysis of data on research data using a Completely Randomized Completely Design Design analysis. The results of the analysis of the physical parameters of liquid organic fertilizer treatments P1, P2 and P3 were not significantly different. Liquid organic fertilizers Yellowish-brown and does not smell of sting. The results of the analysis of the levels of C-organic treatment P1, P2, and P3 were 1.68%, 1.92% and 2% respectively, while nitrogen (N) levels were respectively 0.14%, 0.17% and 0.22%. C/N ratio of each treatment P1, P2 and P3 were 12,20, 11.52, and 9.36, while the phosphor (P) levels are 12.52%, 9.10% and 7.44% respectively. The results of analysis of potassium (K) levels P1, P2, and P3 were 2.19%, 2.09% and 1.87% respectively. The results of microbiological parameters are known to be the amount of liquid organic fertilizer treatment colonies P1, P2, and P3 were  $3.6 \times 10^4$  cfu/ml,  $5.5 \times 10^4$  cfu/ml, and  $8 \times 10^4$  cfu/ml. The addition of different types of starters did not produce significant differences in the quality of the liquid organic fertilizer produced including physical, chemical and microbiological parameters.

(Keywords: Liquid organic fertilizer, urine of beef cattle, EM4, maja fruit, and Petroganic)