ABSTRAK

Penelitian ini bertujuan untuk mengevaluasi pengaruh penambahan *Lactiplantibacillus plantarum* terhadap kualitas fisik (pH, aroma, tekstur, warna, dan keberadaan jamur) serta palatabilitas silase eceng gondok (*Eichornia crassipes*). Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan tiga perlakuan dan enam ulangan, yaitu P0 (kontrol tanpa *L. plantarum*), P1 (penambahan *L. plantarum* 10^5 cfu/ml), dan P2 (penambahan *L. plantarum* 10^8 cfu/ml). Parameter yang diamati meliputi pH, warna, aroma, tekstur, keberadaan jamur, serta palatabilitas.Hasil analisis menunjukkan bahwa penambahan *L. plantarum* berpengaruh nyata ($p < 0,05$) terhadap parameter warna, namun tidak memberikan pengaruh signifikan terhadap pH, aroma, tekstur, keberadaan jamur, dan palatabilitas. Perlakuan P1 dan P2 menghasilkan pH rata-rata 4,1 dan 4,2, sementara P0 memiliki pH 4,0. Palatabilitas silase tertinggi ditemukan pada P2 (201,5 g), diikuti P1 (118,6 g), sedangkan P0 memiliki tingkat konsumsi yang sangat rendah. Penelitian ini menunjukkan bahwa penambahan *L. plantarum* dengan konsentrasi tinggi lebih berpengaruh pada kualitas visual silase, tetapi belum secara signifikan meningkatkan kualitas fisik lainnya maupun palatabilitas.

Kata kunci: *Eichornia crassipes*, silase, *Lactiplantibacillus plantarum*, kualitas fisik, ph.

ABSTRACT

This study aimed to evaluate the effect of adding *Lactiplantibacillus plantarum* on the physical quality (pH, aroma, texture, color, and fungal presence) and palatability of water hyacinth (*Eichornia crassipes*) silage. The experimental design used was a Completely Randomized Design (CRD) with three treatments and six replications, namely P0 (control without *L. plantarum*), P1 (addition of *L. plantarum* at 10^5 CFU/ml), and P2 (addition of *L. plantarum* at 10^6 CFU/ml). The parameters observed included pH, color, aroma, texture, fungal growth, and palatability. The analysis results showed that the addition of *L. plantarum* had a significant effect ($p < 0.05$) on color, but did not significantly affect pH, aroma, texture, fungal growth, and palatability. Treatments P1 and P2 yielded average pH values of 4.1 and 4.2, respectively, while P0 had a pH of 4.0. The highest silage palatability was found in P2 (201.5 g), followed by P1 (118.6 g), while P0 had very low consumption levels. This study indicates that the addition of *L. plantarum* at high concentrations has a greater effect on the visual quality of silage but does not significantly improve other physical qualities or palatability.

Keywords: Eichornia crassipes, silage, Lactiplantibacillus plantarum, physical quality, pH.