

RINGKASAN

ARIF RAHMAN. Konsentrasi VFA dan N-NH₃ pada Rumput Raja, Rumput Setaria, Daun Singkong dan *Azolla sp.* secara *In Vitro*. Penelitian ini bertujuan untuk mengetahui konsentrasi VFA dan N-NH₃ secara *in vitro* dari rumput raja, rumput setaria, daun singkong dan *Azolla sp.* Penelitian menggunakan metode eksperimen secara *in-vitro* dilaksanakan di Laboratorium Ilmu Nutrisi dan Makanan Ternak. Rancangan penelitian menggunakan Rancangan Acak Lengkap (RAL) yang terdiri dari 4 perlakuan dan 5 ulangan. Adapun susunan perlakuannya yaitu : R1= 60% konsentrat + 40% Rumput Raja; R2 = 60% konsentrat + 40% Rumput Setaria; R3 = 60% konsentrat + 40% Daun Singkong; R4 = 60% konsentrat + 40% *Azolla sp.*

Hasil penelitian menunjukkan rata-rata konsentrasi VFA adalah R1 = 98.50 ± 5.12 mM, R2 = 154.00 ± 2.5 mM, R3 = 86.00 ± 5.42 mM, dan R4 = 90.00 ± 3.79 mM. Hasil penelitian menunjukkan rata-rata konsentrasi N-NH₃ adalah R1 = 21.28 ± 2.66 mM, R2 = 18.18 ± 1.79 mM, R3 = 22.34 ± 3.91 mM, dan R4 = 28.38 ± 2.66 mM. Hasil analisis variansi menunjukkan bahwa penggunaan keempat hijauan sebagai pakan berpengaruh nyata ($P < 0,05$) terhadap produk VFA dan N-NH₃.

Kata kunci : *volatile fatty acids* (VFA), NH₃, rumput raja, rumput setaria, daun singkong dan *Azolla sp.*

SUMMARY

ARIF RAHMAN. Concentration of VFA and N-NH₃ at King Grass, Setaria Grass, Cassava Leaves and *Azolla Sp.* by *In-Vitro*. The aim of the research to determine concentration of VFA and N-NH₃ by *in - vitro* from king grass, setaria grass, cassava leaves and *Azolla Sp.* The research method was experiment *in-vitro* at laboratory of Nutrition and feedstuff science. Using Completely Randomized Design (CRD) which consists of 4 treatments and 5 replications. The composition of the treatment are : R1= 60% concentrate + 40% king grass; R2 = 60% concentrate + 40% setaria grass; R3 = 60% concentrate + 40% cassava leaves; R4 = 60% concentrate + 40% *Azolla Sp.*

The result showed average of VFA concentration is R1 = 98.50 ± 5.12 mM, R2 = 154.00 ± 2.5 mM, R3 = 86.00 ± 5.42 mM and R4 = 90.00 ± 3.79 mM. Average of N-NH₃ concentration is R1 = 21.28 ± 2.66 mM, R2 = 18.18 ± 1.79 mM, R3 = 22.34 ± 3.91 mM, dan R4 = 28.38 ± 2.66 mM. Analysis of variance showed that treatment were significant effect (P<0.05) on *volatile fatty acids* and N-NH₃.

Keywords :volatile fatty acids (VFA), nitrogen-amonia (N-NH3), king grass, setaria grass, cassava leaves and Azolla Sp.