

## ABSTRAK

### PENGARUH SUPLEMENTASI RUMPUT LAUT *Eucheuma cottonii* TERHADAP KADAR VFA DAN NH<sub>3</sub> CAIRAN RUMEN SAPI POTONG

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Penelitian ini bertujuan untuk mengetahui suplementasi rumput laut *Eucheuma cottonii* terhadap kadar *Volatile Fatty Acid* (VFA) dan amonia (NH<sub>3</sub>) cairan rumen sapi potong. Penelitian ini dilaksanakan pada Oktober--Desember 2023 di Koperasi Produksi Ternak Maju Sejahtera, Desa Damai Jaya, Kecamatan Tanjung Sari, Kabupaten Lampung Selatan. Penelitian ini dilakukan menggunakan Rancangan Acak Kelompok (RAK) yang terdiri dari 3 perlakuan dan 6 ulangan, dengan menggunakan 18 ekor sapi potong lokal. Perlakuan yang diberikan yaitu P1; rumput pakchong+konsentrat (perbandingan 70%:30% BK pakan), P2; rumput pakchong+konsentrat (perbandingan 70%:30% BK pakan)+rumput laut *eucheuma cottonii* (4% BK pakan) dan P3; rumput pakchong+konsentrat (perbandingan 70%:30% BK pakan)+rumput laut *Eucheuma cottonii* (4% BK pakan)+biochar (0,05% BK pakan). Variabel yang diamati meliputi kadar VFA dan NH<sub>3</sub> cairan rumen sapi potong. Data yang diperoleh dianalisis menggunakan analisis ragam (*Analysis of Variance*) pada taraf 5%. Hasil penelitian ini menunjukkan bahwa suplementasi rumput laut *Eucheuma cottonii* tidak berbeda nyata ( $P>0,05$ ) terhadap kadar VFA dan kadar NH<sub>3</sub> dengan nilai P3 yang berpotensi dapat meningkatkan kadar VFA dan kadar NH<sub>3</sub> pada cairan rumen sapi potong.

Kata kunci: Amonia, Biochar, Rumput laut *Eucheuma cottonii*, Sapi lokal,  
*Volatile Fatty Acid*

## ABSTRACT

### EFFECT OF SEAWEED SUPPLEMENTATION *Eucheuma cottonii* ON VFA AND NH<sub>3</sub> LEVELS OF BEEF CATTLE RUMEN FLUID

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This study aims to determine the supplementation of seaweed *Eucheuma cottonii* against levels of Volatile Fatty Acid (VFA) and ammonia (NH<sub>3</sub>) of beef cattle rumen fluid. This research will be carried out in October--December 2023 at the Maju Sejahtera Livestock Production Cooperative, Damai Jaya Village, Tanjung Sari District, South Lampung. This study was conducted using Group Randomized Design consisting of 3 treatments and 6 repeats, using 18 local beef cattle. The treatment given is P1; pakchong grass+concentrate (ratio 70%:30% DM feed), P2; pakchong grass+concentrate (ratio 70%:30% DM)+seaweed *eucheuma cottonii* (4% DM) and P3; pakchong grass+concentrate (ratio 70%:30% DM)+seaweed *Eucheuma cottonii* (4% DM)+biochar (0.05% DM). Variables observed include levels of VFA and NH<sub>3</sub> of beef cattle rumen fluid. The data obtained were analyzed using Analysis of Variance at the level of 5%. The results of this study showed that seaweed supplementation *Eucheuma cottonii* was not significantly different ( $P>0.05$ ) from VFA levels and NH<sub>3</sub> levels with a P3 value that has the potential increase VFA and NH<sub>3</sub> levels in beef cattle rumen fluid.

Keywords: Ammonia, Biochar, Seaweed *Eucheuma cottonii*, Local cattle, *Volatile Fatty Acid*