

PROFIL RASIO NEUTROFIL/LIMFOSIT (N/L) DAN INTERLEUKIN-6 (IL-6) SAPI BALI BETINA BIBIT YANG DITRANSPORTASIKAN MELALUI KAPAL KAYU SELAMA 120 JAM DARI SUMBAWA KE PONTIANAK

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Intisari

Transportasi ternak melalui kapal kayu di Indonesia masih dikelola secara tradisional. Isu utama *animal welfare* pada transportasi ternak adalah stres transportasi akibat metode yang tidak sesuai dengan prinsip *animal welfare*, sehingga menimbulkan dampak buruk akibat kerugian dari produksi ternak tersebut. Transportasi ternak diatur dalam *Office Internationale Epizooticae* (OIE) dan *International Air Transport Association* (IATA) melibatkan beberapa potensi stres baik eksternal maupun internal. Penelitian ini bertujuan untuk mengetahui pengaruh transportasi sapi Bali betina bibit melalui laut dengan menggunakan kapal kayu 99 GT dengan kapasitas 300-400 ekor dari Sumbawa ke Pontianak selama 120 jam terhadap rasio N/L dan IL-6. Sampel yang digunakan adalah 5 ekor sapi Bali betina bibit. Penelitian ini tanpa menggunakan perlakuan, namun mengikuti *Standar Operating Procedure* (SOP) yang berlaku. Pengambilan sampel darah dilakukan pada empat tahap yaitu hari ke-3 di Instalasi Karantina Hewan (IKH) Sumbawa, *loading*, sandar dan delapan jam di IKH Pontianak. Pemeriksaan rasio N/L didapat dari membandingkan secara langsung persentase neutrofil/limfosit sedangkan pemeriksaan IL-6 menggunakan metode elisa. Hasil pemeriksaan didapatkan rerata rasio N/L berturut-turut adalah $0,88 \pm 0,28$, $1,15 \pm 0,52$, $1,26 \pm 0,43$ dan $1,16 \pm 0,59$. Rerata konsentrasi IL-6 berturut-turut adalah $259,86 \pm 70,16$ pg/mL, $315,41 \pm 64,21$ pg/mL, $410,13 \pm 247,43$ pg/mL dan $424,81 \pm 98,86$ pg/mL. Disimpulkan bahwa tidak terdapat perbedaan yang signifikan ($p > 0,05$) rasio N/L dan IL-6 serta pengangkutan sapi Bali betina bibit menggunakan kapal kayu masih mengikuti kaidah *animal welfare* ditinjau dari profil rasio N/L dan IL-6 sapi Bali betina bibit yang ditransportasikan menggunakan kapal kayu selama 120 jam dari Sumbawa ke Pontianak.

Kata kunci : transportasi, sapi Bali betina bibit, kapal kayu, N/L, IL-6

**PROFILE OF NEUTROFIL/LIMFOSIT (N/L) RATIO AND
INTERLEUKIN-6 (IL-6) OF FEMALE BALI'S BREED
CATTLE TRANSPORTED BY TRADITIONAL
VESSEL DURING 120 HOURS FROM
SUMBAWA TO PONTIANAK**

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Abstract

Transportation of livestock through traditional vessels in Indonesia is still traditionally managed. The main issue of animal welfare in livestock transportation is transportation stress due to methods that are not in accordance with the principle of animal welfare, thus causing adverse effects due to losses from livestock production. Livestock transport is organized into Office Internationale Epizooticae (OIE) and International Air Transport Association (IATA) involving some potential external and internal stress. This study aims to determine the effect of female Bali's breed cattle transport by sea using 99 GT traditional vessels with a capacity of 300-400 tail from Sumbawa to Pontianak for 120 hours to the ratio of N/L and IL-6. The samples used were 5 female Bali's breed cattle. This study without using treatment, but following the applicable Standard Operating Procedure (SOP). Blood sampling was done on four stages, ie 3rd day at Animal Quarantine Installation (IKH) Sumbawa, loading, docking and eight hours at IKH Pontianak. Examination of N/L ratio was obtained by comparing directly the percentage of neutrophil/lymphocyte while IL-6 examination using elisa method. The results showed that the mean N/L ratios were 0.88 ± 0.28 , 1.15 ± 0.52 , 1.26 ± 0.43 and 1.16 ± 0.59 , respectively. The mean concentrations of IL-6 were 259.86 ± 70.16 pg/mL, 315.41 ± 64.21 pg/mL, 410.13 ± 247.43 pg/mL and 424.81 ± 98.86 pg/mL. It was concluded that there was no significant difference ($p > 0.05$) ratio of N/L and IL-6 as well as transporting female Bali's breed cattle using traditional vessels still following animal welfare rules in terms of N/L and IL-6 female Bali's breed cattle Seedlings that are transported by traditional vessel for 120 hours from Sumbawa to Pontianak.

Keywords: transportation, female Bali's breed cattle, traditional vessels, N/L, IL-6