

## Efektivitas Ekstrak *Sargassum sp.* terhadap Tingkat Stres *Day Old Chicken* (DOC) Galur Cobb dan Galur Jawa Super yang Mengalami Transportasi dari Yogyakarta ke Makassar

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### INTISARI

Penelitian ini bertujuan mengetahui tingkat stres *Day Old Chicken* (DOC) yang mengalami transportasi udara, perbedaan stres antara DOC galur Cobb dan galur Jawa Super yang dilaluintaskan serta efektivitas ekstrak *Sargassum sp.* untuk mencegah stres transportasi DOC. Pada penelitian ini menggunakan DOC 32 ekor galur Cobb dan 32 ekor galur Jawa Super yang ditransportasikan sesuai kondisi di lapangan. *Day Old Chicken* dibagi menjadi dua kelompok yaitu kontrol (pemberian *aquadest*) dan perlakuan (pemberian ekstrak *Sargassum sp.* dosis 450 mg/kg BB). Proses transportasi diawali dari *hatchery* menuju kargo (*loading*) Yogyakarta, transportasi udara dari bandara Yogyakarta menuju bandara Makassar, dilanjutkan transportasi darat dari kantor pelayanan karantina (*landing*) menuju kandang peternak (*farm*) di Kabupaten Maros. Pengambilan sampel darah dan preparat apus darah dari empat ekor setiap kelompok dilakukan pada empat lokasi. Serum darah diperiksa kadar hormon kortikosteron sedangkan preparat apus darah untuk menghitung rasio heterofil (H) dan limfosit (L). Hasil penelitian menunjukkan bahwa pemberian ekstrak *Sargassum crassifolium* dapat mencegah peningkatan kadar kortikosteron DOC galur Cobb saat *loading*, *landing* dan sampai di *farm* sedangkan pada DOC galur Jawa Super menurunkan kadar kortikosteron lebih tinggi saat *loading* dan *farm* serta mencegah peningkatan kadar kortikosteron saat *landing*. Ekstrak *Sargassum crassifolium* menurunkan rasio H:L saat *landing* pada kedua galur DOC. Analisis statistik menunjukkan perbedaan kadar kortikosteron dan rasio H:L yang signifikan ( $P < 0,05$ ) antara DOC galur Cobb dan Jawa Super namun pemberian ekstrak *Sargassum crassifolium* menunjukkan perbedaan yang tidak signifikan ( $P > 0,05$ ) pada kadar kortikosteron dan rasio H:L pada kedua galur DOC selama transportasi. Berdasarkan hasil penelitian dapat disimpulkan setiap galur memiliki ketahanan tubuh yang berbeda dalam merespon cekaman stres saat transportasi, ekstrak *Sargassum crassifolium* dapat menekan kenaikan hormon kortikosteron sehingga berpotensi mengurangi tingkat stres pada DOC selama transportasi.

**Kata Kunci:** *Day Old Chicken*, Kortikosteron, *Sargassum sp.*, Stres, Transportasi.

## Effectiveness of *Sargassum sp.* Extracts on the Stress Day Old Chicken (DOC) Strain Cobb and Javanese Super Strains Experiencing Transportation from Yogyakarta to Makassar

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### ABSTRACT

This study aims to determine the stress level of Day Old Chicken (DOC) which experiences air transportation, the stress difference between the DOC Cobb strain and the Java Super strain passed through and the effectiveness of the *Sargassum sp.* Extract. to prevent the stress of DOC transportation. In this study, DOC 32 Cobb lines and 32 Java Super lines were transported according to the conditions in the field. Day Old Chicken is divided into two groups, namely control (administering distillation water) and treatment (administration of *Sargassum sp.* doses 450 mg/kg Body Weight). The transportation process starts from the hatchery to the cargo (loading) of Yogyakarta, air transportation from the Yogyakarta airport to the Makassar airport, followed by land transportation from the quarantine service office (landing) to the farmer's cage in Maros Regency. Blood sampling and blood smear preparations from four tails of each group were carried out at four locations. Blood serum was examined corticosterone hormone levels while blood smear preparations to calculate the ratio of heterophils (H) and lymphocytes (L). The results showed that administration of *Sargassum crassifolium* extract could prevent elevated levels of corticosterone DOC Cobb strains when loading, landing, and arrived at the farm while in DOC Java Super strain reduced corticosterone levels higher at loading and farm and prevented increased corticosterone levels when landing. *Sargassum crassifolium* extract reduced the H: L ratio at landing on both DOC lines. Statistical analysis showed significant differences in corticosterone levels and H: L ratio ( $P < 0.05$ ) between Cobb and Java Super DOC lines but administration of *Sargassum crassifolium* extract showed no significant difference ( $P > 0.05$ ) in corticosterone levels and H:L ratio on both DOC lines during transportation. Based on the results of this study, it can be concluded that each strain has different body resistance in responding to stress during transportation, *Sargassum crassifolium* extract can suppress the increase in corticosterone hormone so that it has the potential to reduce stress levels in DOC during transportation.

**Keywords:** Day Old Chicken, Corticosterone, *Sargassum sp.*, Stress, Transportation