KEMAMPUAN ADAPTASI FISIOLOGIS SAPI PERSILANGAN ANGUS-BALI PADA LINGKUNGAN TROPIS DI KABUPATEN BUNGO, JAMBI

INTISARI

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Sapi Bali (*Bos sondaicus*), merupakan sapi asli Indonesia yang telah lama diketahui mampu beradaptasi di lingkungan tropis. Program *crossbreeding* dengan sapi Angus (*Bos taurus*) bertujuan meningkatkan produktivitas, namun belum ada kajian terkait adaptasi hasil persilangan ini di lingkungan tropis. Penelitian dilakukan di Kecamatan Pelepat Ilir, Kabupaten Bungo, Jambi, 20 ekor sapi persilangan Angus-Bali dan 14 ekor sapi Bali diteliti karakteristik kulit, kemampuan adaptasi fisiologis dan tingkah laku. Indikator warna rambut dan kulit diukur dengan metode RGB. Data fisiologis dianalisis dengan Rancangan Acak Lengkap (RAL) pola faktorial untuk membedakan waktu pagi (05.00-09.00), siang (12.00-16.00), dan malam (20.00-24.00). Hasil menunjukkan lingkungan tropis memiliki suhu, kelembaban dan THI berbeda ($P < 0,05$); suhu mencapai 31,82 ± 2.30˚C (siang), kelembaban 92,87 ± 3,41% (pagi) dan THI 92,87 ± 3,41% (malam). Nilai RGB sapi persilangan Angus-Bali lebih rendah ($P < 0,05$), folikel rambut lebih sedikit, yaitu masing-masing 15,18 ± 2,24 dan 21,38 ± 4,33/mm^2 ($P < 0,05$), menyebabkan suhu permukaan kulit lebih besar yaitu masing-masing 35,41 ± 1,14 dan 34,31 ± 2,27˚C, serta tingkah laku *standing* dan *lying* lebih besar ($P < 0,05$). Meskipun sapi persilangan Angus-Bali pada siang hari memiliki status fisiologis lebih tinggi ($P < 0,05$), namun HTC lebih rendah ($P < 0,05$). Disimpulkan bahwa sapi persilangan Angus-Bali memiliki daya adaptasi yang baik terhadap lingkungan tropis Indonesia.

Kata kunci: Persilangan sapi Bali, tingkah laku, Lingkungan tropis Indonesia, Adaptasi fisiologis, Karakteristik kulit.

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ABSTRACT

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The Bali cattle (*Bos sondaicus*), are native cattle of Indonesia, which have long been known to be able to adapt to tropical environments. The Angus cattle (*Bos taurus*) crossbreeding program aims to increase productivity, however there was no study related to the adaptation in tropical environment of this crossbreed. This research was conducted in Sub-district of Pelepat Ilir, Bungo Regency, Jambi. Twenty Angus-Bali cross cattle dan 14 Bali cattle were examined on skin charateristic, physiological adaptability and behavior. Hair color and skin indicators were measured by the RGB method. The physiological data was analyzed by Complete Randomized Design (CRD) of the factorial pattern to distinguish morning (05.00-09.00), afternoon (12.00-16.00), and night (20.00-24.00). The results showed that the tropical environment had different temperatures, different humidity, and different THI ($P < 0.05$); the temperature reached at 31.82 ± 2.30˚C in the afternoon, the humidity at 92.87 ± 3.41% in the morning and THI at 82.91 ± 1.40 in the afternoon. The RGB values of Angus-Bali cross cattle were lowest ($P < 0.05$), had fewest hair follicles ($P < 0.05$) (15.18 ± 2.24 vs 21.38 ± 4.33/mm2) which caused the skin surface temperature was greatest ($P < 0.05$) (35.41 ± 1.14 vs 34.31 ± 2.27˚C), standing and *lying* behavior was greatest ($P < 0.05$). Although Angus-Bali cross cattle during the afternoon had a highest physiological status ($P < 0.05$), but their HTC was lowest ($P < 0.05$). It was concluded that Angus-Bali cross cattle has good adaptability in Indonesia's tropical environment.

Keyword : Bali *cross cattle*, Behavior, Indonesian tropical environment, Physiological adaptability, Skin characteristic.