

EMBRYONIC DEATH INCIDENTS DUE TO HEAT STRESS AND EFFECT OF THERAPY WITH *GONADOTROPIN RELEASING HORMONE* (GnRH) IN ACEH CATTLE

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Abstract. The aim of this study was to determine the effect of gonadotropin releasing hormone (GnRH) therapy on reducing of embryonic death in Aceh cattle due to heat stress. This study used 20 female cattle aged between 5 to 8 years with average weight of 150-250 kg, and had two times regular cycle. All cattle used in this study was provided by Aceh Livestock Breeding Center for Excellence Indrapuri, Aceh Besar which clinically healthy and has a good score that was kept in paddocks and fed with forages and concentrates. The cattle were divided into two groups; each group consisted of 10 cattle. The cattle in group one (K1) was synchronized using PGF₂ α while those in group two (K2) was synchronized using ovsynch protocol. Artificial insemination method used for mating after examination of semen motility which obtained from frozen semen of Aceh cattle. Pregnancy rates performed by transrectal ultrasonography after 25 days post-insemination. The examination was repeated every 10 days until 55 days post-insemination. Blood samples for progesterone were collected from the jugular vein and tested by *enzyme linked immunoassay* (ELISA) at integrated research Laboratory of Veterinary Medicine Faculty, Syiah Kuala University. The result showed that 50 % of embryonic death was occurred in group K1, but none in K2 after day 25. It could be assumed that heat stress caused the death of embryos and GnRH therapeutic was the solution to decrease the deaths.

Keywords: Aceh cattle, Embryonic death, Heat stress, Progesterone