THE INFLUENCE OF ENVIRONMENTAL TEMPERATURE DIFFERENCES BETWEEN HIGHLANDS AND LOWLANDS TOWARD REPRODUCTION ABILITY OF LOCAL *Friesian Holstein* DAIRY COWS AS ARTIFICIAL INSEMINATION ACCEPTOR

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ABSTRACT

This research aims to determine the influence of environmental temperature differences between highlands and lowlands toward reproduction ability of local *Friesian Holstein* dairy cows artificial insemination acceptor. Farm is a business activity in an effort to increase the operational benefits of livestock through the application of certain techniques which are economically profitable. This research was conducted in sub-district Sendang and Nongkojajar as highlands and sub-district Grati district Pasuruan, Surabaya and Gresik as lowlands. Result of the research was analyzed descriptively and gained an average of temperature and the humidity in the highlands respectively 26,3±1,71°C and 76,30±5%, while in the lowlands obtained an average temperature of 31,4±2,02°C and a humidity of 62±9%. Results acceptor reproduction ability of dairy cattle inseminated using parameters *non return rate*, *conception rate* and *service per conception* result in highlands values obtained NRR 85.5%, CR 71,1% and S/C 1,38 whereas lowlands result NRR 80%, CR 66,7% and S/C 1,45. The results obtained showed a better value to dairy farming at highlands. Based on statistical analysis using linier regression showed that there is linear correlation between environmental temperature and reproduction ability in local *Friesian Holstein* dairy cows' acceptors artificial insemination. But the effect was small or not significant.

Keyword : environmental temperature, reproduction ability, dairy cows, *non return rate*, *conception rate* and *service per conception*