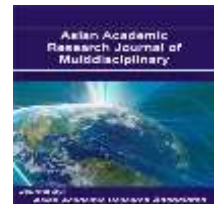




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THE DESIGN OF SMART THERMOSTAT TO INCREASE CONCEPTION RATE IN DAIRY CATTLE BASED ON BASAL TEMPERATURE

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Abstract

The study, entitled The Design of Smart Thermostat to Increase Conception Rate in Dairy Cattle Based on Basal Temperature is the first year aims to find differences in body temperature and body temperature of dairy cows in estrous, this temperature difference that will be used as a marker in creating smart thermometer. In accordance with the scheme of first year of this research using 100 cows; 50 cows were inseminated representing the highland (KUD Tunas Baru Setia – Nongkojajar Pasuruan) and 50 cows were represent the lowland (KUD Suka Makmur – Grati Pasuruan). Before inseminated all cows were measured body temperature by rectum temperature using digital thermometer. Results of the research up to the progress made are 1).The results of the average rectum temperature when 50 cows were inseminated in region of KUD Tunas Baru Setia – Nongkojajar Pasuruan is 38.41 °C, 27.08 °C room temperature and humidity 75%; 2). The results recum temperature while 50 cows were inseminated in the region of KUD Suka Makmur – Grati Pasuruan is 38.33 °C; 31.55 °C room temperature and 57% humidity. Conception rate (CR) using rectal palpation at days 75-90 after AI showed that percentage of CR are 64% and 67% .Conclusion of the research is the rectum temperature that recommended to make a smart thermometer marked at 38,18 °C.

Key words: thermometer; artificial insemination; conception rate; lowland and highland.

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