

ABSTRACT

Conception rate of Holstein and Japanese Black cattle following embryo transfer in southwestern Japan

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This study aimed to quantify and compare conception rates to embryo transfer (ET) of Holstein and Japanese Black cattle in southwestern Japan. A 10-year retrospective epidemiological survey was conducted. The recipient numbers for Holstein and Japanese Black cattle was 621 and 527, respectively. Conception rates of Holstein and Japanese Black cattle during the study period were 45.4% and 42.3%, respectively. There was no significant difference between both breeds. However, a different trend of conception rate to ET in Holstein and Japanese Black cattle was observed. In Holstein cattle, conception rate in August to October was lower than in the other months and was significantly lower ($p < .05$) than in April. Particularly, conception rate in October of Holstein cattle was the lowest (31.0%). In Japanese Black cattle, conception rates in December (24.2%) and January (31.3%) were lower than in the other months. Conception rate of Japanese Black cattle declined as the temperature–humidity index (THI) decreased, exhibiting significantly lower levels in the ≤ 45 THI class than in any other THI class ($p < .05$). By contrast, in Holstein cattle, no relationship was observed between conception rate and THI on the day of ET. These observations suggest the importance of appropriate management that considers seasonal reactivity in each breed.

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