

Reproductive Traits for Holstein Cattle

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Abstract : Data consisting of 2757 records from two Holstein herds made between 2000 and 2010 were used to examine environmental factors affecting age at first calving (AFC) and calving intervals (CI) and consequently estimate genetic and phenotypic parameters and trends. The overall means and standard errors for AFC and CI were 39.4 ± 7.2 months and 487.5 ± 151.6 days respectively. The respective heritability estimates were 0.091 ± 0.05 and 0.044 ± 0.032 , while the repeatability estimate for CI was 0.096 ± 0.001 . The genetic trends for CI and AFC were -0.6 d/yr and -0.01 mo/yr respectively and were both significant ($P < 0.001$), indicating a decrease in mean breeding value over the study period. Phenotypic trends were -0.31 mo/yr and -0.35 d/yr for AFC and CI respectively though non-significant ($P > 0.05$). The low heritability for CI and AFC indicated that temporary environmental influences were much greater than genetic influences or permanent environmental influences on these traits.

Keywords : Holstein, reproductive, genetic parameters, heritability

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