

## Genetics of Birth and Weaning Weight of Holstein, Friesians in Sudan

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**Abstract :** The objectives of this study were to estimate the means and genetic parameters of birth and weaning weight of calves of pure Holstein-Friesian cows raised in Sudan. The traits studied were: \*Weight at birth \*Weight at weaning. The study also included some of the important factors that affected these traits. The data were analyzed using Harvey's Least Squares and Maximum Likelihood programme. The results obtained showed that the overall mean weight at birth of the calves under study was  $34.36 \pm 0.94$  kg. Male calves were found to be heavier than females; the difference between the sexes was highly significant ( $P < 0.001$ ). The mean weight at birth of male calves was  $34.27 \pm 1.17$  kg while that of females was  $32.51 \pm 1.14$  kg. The effect of sex of calves, sire and parity of dam were highly significant ( $P < 0.001$ ). The overall mean of weight at weaning was  $67.10 \pm 5.05$  kg, weight at weaning was significantly ( $p < 0.001$ ) effected by sex of calves, sire, year and season of birth have highly significant ( $P < 0.001$ ) effect on either trait. Also estimates heritabilities of birth weight was ( $0.033 \pm 0.015$ ) lower than heritabilities of weaning weight ( $0.224 \pm 0.039$ ), and genetic correlation was 0.563, the phenotypic correlation 0.281, and the environmental correlation 0.268.

**Keywords :** birth, weaning, weight, friesian

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