



University of Zabol

Graduate school

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The Thesis Submitted for M.Sc. Degree of Animal Breeding and Genetics

**Dystocia genetic relationship with economically
important traits of Holstein cows using a
threshold model of fatherhood**

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September 2014

Abstract

The aim of the study was to evaluate dystocia associated with economically important traits in Holstein dairy cows in Iran. Dystocia in Holstein cows in the dairy industry is a major economic losses. Difficult calvings on calf survival, fertility rates, and eliminating the need to assist a veterinarian. High incidence of dystocia in cattle reduces profitability, for direct (veterinary expenses, the death of the cow or calves) increases and indirect costs herd reproductive performance cycle to the next reproductive risks and reduced milk production. The data used for this study was received from the Animal Breeding Center and animal models were used to estimate the parameters. Characteristics examined in this study included the productive traits milk, fat, protein, as well as reproductive traits, including from first insemination return to the insemination resulting in pregnancy, Calving to first insemination(CFI), Calving interval (CI), and dystocia (CE) which corresponds to first calving cows were used. DMU software(Madsen and Jensen, 2007) were used to estimate genetic and phenotypic parameters. It should be noted that these estimates using REML and Gibbs sampling was performed based on Bayesian theory. Achieve convergence test based on trace plots using the R software program provided by the BOA was performed.

Keywords: Dystocia, Genetic relationship, Holstein, Threshold traits father