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CORRELATION BETWEEN BREEDING VALUE FOR TICK RESISTANCE AND INFESTATION LEVELS IN BOVINES EXPOSED TO NATURAL AND ARTIFICIAL INFESTATIONS[1]

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This study was conducted to estimate Pearson correlations between breeding values (BV) for cattle tick counts of Braford heifers and the phenotypes expressed by the animals exposed to natural and artificial infestations, and between the infestation levels of naturally and artificially infested animals. The number of ticks at one side of 974 naturally infested heifers was counted from November 2009 through May 2010 in Delta G Connection breeding program herds. Variance components were obtained using Bayesian inference. Pedigree information was composed by 19,036 animals, and the results were used to ranking the heifers according to their BV. After that, 20 females with the lowest BV and 20 with the highest BV were selected and moved to an experimental area at Embrapa Southern Region Animal Husbandry (Rio Grande do Sul, Brazil). From February to March 2011 four artificial infestations were done and the number of ticks on one side of body was counted from day 19 to 23 of each infestation. Correlations between BV and natural and artificial infestations were, respectively, 0.97 and 0.74, and between infestation levels presented under the two challenge methods was 0.81. The results indicate that the tick infestation levels are similar in natural and artificial infestations and that breeding values for tick count are useful to predict animal's tick resistance and performance at challenging parasitism conditions.