

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

THE GENETIC TRENDS OF PRODUCTION CHARACTERISTICS OF BOVINES DAIRY GIR

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The objective was to estimate the genetic trends for milk yield and fat yield in 305 days (MY305 and FY305, respectively) of pure Dairy Gir animals, members of the National Breeding Program for the Dairy Gir (PNMGL). The methodology used to obtain the genetic values was the maximum restricted likelihood (REML) in an animal model. Genetic trends were estimated by linear regression of the means of genetic values by the year of birth of females measured (with production data), females (in general) and males. The analyzes were divided into two periods (1935-1992 and 1993-2013 for MY305, 1935-1992 and 1993-2010 for FY305), due to the publication of the first program summary of bulls with progeny test results in 1993. For MY305 in kg/year for females measured (25.49), females (26.11) and males (35.13) were clearly superior to the genetic changes of the first period (2.52, 2.06, and 1.00, respectively). It can be assumed that the results obtained in the second period demonstrate the effectiveness of the breeding program, in which the progeny test and the availability of the bull summaries provided consistent information from the genetic evaluation of Dairy Gir bulls to the breeders. The annual genetic change of males in the second period demonstrates the use of proven bulls in the selection process. This perception is relevant, since most of the genetic progress in dairy cattle is derived from the selection of bulls, since the intensity of selection in females is low. For FY305, the genetic trends in kg/year in the first period were inexpressive for females measured (0.001), females (0.007) and males (0.010). As observed for MY305 in the second period, males showed a greater genetic change for FY305 in kg/year (0.565), followed by females (0.238) and females measured (0.223). The trends for FY305 in the second period can be explained indirectly by the annual increase in the mean of the genetic values for MY305, since there is a known positive genetic correlation between milk yield and fat yield. Another possibility is that, unlike MY305, FY305 was considered as one of the selection criteria only from the 1990s, when the most expressive genetic trends were observed. This is probably due to the recent valuation of solids by the industry and the availability of genetic evaluations of Dairy Gir reproducers for this characteristic, since the publication of the first PNMGL bulls summary in 1993.

Keywords: Animal breeding, genetic progress, progeny test, zebu.

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