PEDIGREE QUALITY OF THE LUSITANO HORSE IN BRAZIL

QUALIDADE DO PEDIGREE DA RAÇA PURO SANGUE LUSITANO NO BRASIL

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The quality of pedigree information is extremely important in studies of population parameters and genetic diversity, as well as for selection of animals for use in breeding programs. The objective of the study was to estimate the average number of known generations of Lusitano horses (PSL) in Brazil, by means of analysis of the pedigree. The data used came from the Brazilian Lusitano Horse Breeders Association (ABPSL), from two populations: the total population with 18,920 animals born between 1912 and 2012, and the reference population composed of 8,329 animals, corresponding to the records of births from 2003 to 2012, used as reference of the active population and equal to the value (10.0 years) of the average generation interval of horses. The quality of pedigree information was determined by the average number of known generations and was represented in three different ways: number of complete generations (CG), indicating the number of generations with both progenitors known; number of generations (EG), calculated by summing all known ancestors, based on the calculation of (½) n, where n is the number of generations between the animal and every known ancestor, considered the best way to represent the pedigree information; and maximum number of generations (MG), providing the number of generations separating an individual from its most remote ancestor, regardless of whether both parents are known. The results were as follows: number of CG, 3.4 ± 1.1; number of EG, 5.5 ± 1.3; and MG value, 9.1 ± 2.6 for the total population. These were in the same order as for the recent population values of 3.8 ± 0.9, 6.3 ± 0.7 and 10.5 ± 1.5. The maximum results observed for the CG, EG and MG numbers were 6, 8 and 15 generations, respectively, for the recent population. The increased pedigree records of the recent population indicate improvements in the quality of genealogical information, consequently resulting in greater veracity in studies with the PSL breed in Brazil. It can be concluded that the quality of pedigree information improved in the most recent 10 year interval, but still presents record absences, detrimental to evolution and corrections in the breed, so the ABPSL should pay closer attention to the importance of the information in the records in order to obtain a better response to selection, greater accuracy and inclusion of new animals in breeding programs.

Keywords: breeding, equine, generations.

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