

عنوان مقاله:

Allelic polymorphism of K-casein, β -Lactoglobulin and leptin genes and their association with milk production traits in Iranian Holstein cattle

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خلاصه مقاله:

The purpose of this study was to investigate the polymorphism of K-casein (K-CN), β -Lactoglobulin (B-LG) and leptin (LP) genes in Iranian Holstein cattle by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) technique. DNA was extracted from blood samples of 139 cows using a modified phenol chloroform method. Association between K-CN, B-LG and LP genes' polymorphism with milk production traits were investigated using mixed procedure of SAS software. The frequencies of AA, AB and BB genotypes for K-CN (0.72, 0.18 and 0.10), B-LG (0.43, 0.28 and 0.29) and LP (0.24, 0.63 and 0.13) were also calculated. Statistical results revealed a significant association between AA and BB genotypes of the K-CN gene with milk production and milk protein percentage, respectively. Also, BB genotype of the B-LG gene and AA genotype of the LP gene showed a significant association with protein percentage and milk production ($P < 0.05$), respectively. Therefore, it is feasible to improve milk production traits in these herds using the studied genes

کلمات کلیدی:

Holstein cattle, K-casein, β -Lactoglobulin, leptin gene, PCR-RFLP, milk production traits

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