

OarJMP8 and OarHH55 Microsatellite DNA in Composite Breed Sheeps

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Abstract:

Recently, microsatellite DNA is often used as marker for studying the genetic variability. Microsatellite DNA is tandemly repeated sequence abundantly present in eucaryotic genome, include mammals. In the present research, OarJMP8 and OarHH55 loci were used to assess genetic variability of composite breed sheeps. Two pairs of primer were used to amplify microsatellite DNA using Polymerase Chain Reaction (PCR) technique. The result showed that OarJMP8 and OarHH55 loci had four alleles wich are A, E, C, and D. The highest allele frequency on OarJMP8 was 41,38% (E). In addition, the highest allele frequency on OarHH55 was 45,73% (C). Genotypes for OarJMP8 were AB, AC, EC, ED and CC. Then the highest genotype frequency on OarJMP8 was 70,11% (ED). Genotypes on OarHH55 are AB, AC, BC, CC and CD. The highest genotype frequency on OarHH55 was 32,93% (BC and ED). Heterozygosity value for OarJMP8 was 0,6817. Heterozygosity value for OarHH55 was 0,6947. The average heterozygosity between two loci were 0,6882. This value showed that Composite breed sheeps at Balitnak Research Station have high variability. Genotype for two loci were not significantly ($p > 0,05$) for birth weight and daily gain. The result indicate that both of loci had no association with birth weight and daily gain trait. In addition, OarHH55 was not significantly ($P > 0,05$) for litter size, but OarJMP8 was significantly for litter size ($p < 0,05$). Consequently OarJMP8 had association with litter size trait.

[Skripsi Lengkap - fulltext]