

Performance of High Density Genotyping in Sahiwal Cattle Breed

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Abstract : The objective of this study was to evaluate the informativeness of Bovine high density SNPs genotyping in Sahiwal cattle population. This is a first attempt to assess the Bovine HD SNP genotyping array in any Pakistani indigenous cattle population. To evaluate these SNPs on genome wide scale, we considered 777,962 SNPs spanning the whole autosomal and X chromosomes in Sahiwal cattle population. Fifteen (15) non related gDNA samples were genotyped with the bovine HD infinium. Approximately 500,939 SNPs were found polymorphic (MAF > 0.05) in Sahiwal cattle population. The results of this study indicate potential application of Bovine High Density SNP genotyping in Pakistani indigenous cattle population. The information generated from this array can be applied in genetic prediction, characterization and genome wide association studies of Pakistani Sahiwal cattle population.

Keywords : Sahiwal cattle, polymorphic SNPs, genotyping, Pakistan

Conference Title : ICASVM 2015 : International Conference on Animal Science and Veterinary Medicine

Conference Location : Bangkok, Thailand

Conference Dates : December 17-18, 2015