



## **PERFORMANCE OF THE GENESEEK® GENOMIC PROFILER BOVINE HD™ FOR BEEF CATTLE IN HEREFORD**

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The high density GeneSeek Genomic Profiler BeadChip (GGP) features nearly 78,000 SNPs for genomic expected progeny differences, genome wide selection, comparative genetic studies and higher density BeadChip imputation. Therefore, the aim of the present study is to test the performance of the GGP on Hereford breed in Uruguay. DNA from 512 Hereford steers sired by 20 pedigree bulls was isolated and genotyped with the GGP. All analyzes were done using SNP & Variation Suite v8.x (Golden Helix, Inc., Bozeman, MT, [www.goldenhelix.com](http://www.goldenhelix.com)). The 76,883 SNPs present in the GGP are widespread in the genome showing a density of 1 SNP per 34.7kb. Further analyses were performed with the 74,672 autosomal SNPs. All samples had a call rate over 90% and a total of 74,672 SNPs had a call rate over 90%. The 90% threshold is used to select SNPs for genomic evaluations. Only 2,515 were non-polymorphic (Minor allele frequency, MAF <0.01) on the other hand 36862 were highly polymorphic (MAF >0.3). Despite the fact that the GGP is being greatly use, to our knowledge there are no reports about its performance. The present study shows the high performance of the GGP in this first sample of Hereford animal, previous to its utilization for genome wide association studies and genomic prediction.

Keywords: SNPs, GGP, MAF, Call rate.