

## STUDY OF VARIATION IN ALLELE F OF GENE ALPHAS1-CASEIN IN GOATS

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Previous studies of the goat alphas1-casein gene, which encodes for a major protein in the milk, showed that polymorphism is associated with differences in the level of protein synthesis. 18 alleles have already been described that are associated with four levels of expression: "null", "low", "medium" and "strong". The objective in this study was to investigate the sequence variation in exon and intron 9, associated with allele F ("low" expression). Isolation of samples of DNA was carried out by CTAB and four primers were designed based on the genomic sequence of the alphas1-casein gene (GenBank AJ504710). After amplification, the samples were analysed on a polyacrylamide gel and subjected to *XmnI*-restriction analysis. The pattern of bands, PCR-RFLP analysis and the sequencing of PCR products showed that a few fragments presented not only a deletion of a cytosine in the exon IX but also two insertions: one of 11 bps and another of 3 bps in the intron IX. These are typical mutations in the allele F and are absent in alleles of "strong" production. However, our results showed that there are combinations between the insertions in the intron IX, leading to a few fragments with either the insertion of 11 bp or the insertion of a 3 bp.

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