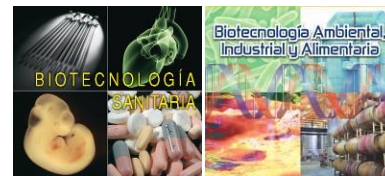

Poster

Improve the production and quality of milk malagueña goat by the identification and validation of genetic markers (QTLs)



Antonio José Gómez Cárdenas(1) y Víctor Álvarez Tallada(1,*)

(1)Departamento de Genética/Centro Andaluz de Biología del Desarrollo (CABD), Carretera de Utrera km 1, 41013 Sevilla.

Keywords: α -S1-casein, malagueña goat, allelic frequencies

ABSTRACT

Motivation:

Malagueña goat is one of the most dairy goat breeds in the world with an average production of 500 liters of milk, per female, per year; with approximately 300,000 animals.

Currently, the Malagueña goat breed improvement program, is based on the selection of the best individuals based on morphologic criteria. So that, a greater number of morphological skills exist in a specimen, better genetic evaluation is assigned.

On the other hand, for years it has been studying the association of molecular genetic markers with cheese production. Specifically, they have been described in several global locations even 18 alleles of the caseins directly related to the total protein content. There are described alleles of high, medium, low and zero protein production.

In this paper we perform a genetic identification by genotyping of these alleles to validate the program to improve the Malaga goat breed.

Methods:

The DNA is obtained by extraction from blood and/or hair for later identification of each copy of haplotype.

To this end, we perform 4 levels of diagnostic PCRs that allows us to separate high production alleles from others.

Comparing the allelic frequencies obtained in a selected group as producers, with a low production control group we can validate the polymorphism of α -S1-casein protein as a marker of individual milk production.

Results:

Assuming that the in process method will be validated, the results will be applied to design a controlled crosses program aimed to improve the cheese degree apply.

REFERENCES

- 1.Jordana, J., Amills, M., Diaz, E., Angulo, C., Serradilla, J. M., & Sanchez, A. (1996). Gene frequencies of caprine α s1-casein polymorphism in Spanish goat breeds. *Small Ruminant Research*, 20(3), 215–221. [http://doi.org/10.1016/0921-4488\(95\)00813-6](http://doi.org/10.1016/0921-4488(95)00813-6)
- 2.Marletta, D., Criscione, A., Bordonaro, S., Guastella, A. M., & D'Urso, G. (2007). Casein polymorphism in goat's milk. *Le Lait*, 87(6), 491–504.
- 3.Montalbano, M., Tortorici, L., Mastrangelo, S., Sardina, M. T., & Portolano, B. (2014). Development and validation of RP-HPLC method for the quantitative estimation of α s1-genetic variants in goat milk. *Food Chemistry*, 156, 165–169. <http://doi.org/10.1016/j.foodchem.2014.01.091>