



**HAL**  
open science

## Genetic relationship between ewe lamb growth and adult ewes liveweight

Dominique Francois, Manon Leboeuf, Yves Bourdillon, Thierry Fassier,  
Jacques J. Bouix

### ► To cite this version:

Dominique Francois, Manon Leboeuf, Yves Bourdillon, Thierry Fassier, Jacques J. Bouix. Genetic relationship between ewe lamb growth and adult ewes liveweight. 62. Annual Meeting of the European Federation of Animal Science (EAAP), Aug 2011, Stavanger, Norway. Wageningen Academic Publishers, Abstract, p. 200, 2011, 978-90-8686-177-4. hal-02804295

**HAL Id: hal-02804295**

**<https://hal.inrae.fr/hal-02804295v1>**

Submitted on 5 Jun 2020

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

**Genetic relationship between ewe lamb growth and adult ewes liveweight**

*Francois, D.<sup>1</sup>, Leboeuf, M.<sup>1</sup>, Bourdillon, Y.<sup>2</sup>, Fassier, T.<sup>2</sup> and Bouix, J.<sup>1</sup>, <sup>1</sup>INRA, Génétique Animale, UR 631 SAGA, 31326 Castanet Tolosan, France, <sup>2</sup>INRA, Génétique Animale, UE 332 Domaine de la Sapinière, 18390 Osmoy, France; [Dominique.Francois@toulouse.inra.fr](mailto:Dominique.Francois@toulouse.inra.fr)*

Data of the experimental flock of la Sapinière (Romane INRA-401 breed) concerning the liveweight at weaning at 70 days, at the selection for replacement at 120 days and, adult liveweight at mating, data collected on 9671 ewes. Heritability of Average Daily gain between 70 and 120 days was 0.24, heritability of Adult Liveweight was 0.53. Genetic correlation between Average Daily gain between 70 and 120 days, and Adult Liveweight was 0.83. Since growth is a selection criteria in this nucleus, a tendency to increase Adult Liveweight is expected. Increase of liveweight means increase of maintenance nutrition requirements and is not wanted by breeders. To prevent increase of liveweight in such a context, management of ewes (adult & replacement) must tend to reduce environmental effect in particular nutrition. Analysis of ewes liveweights data for 20 years (1990-2009) for this flock showed a decrease from 66.5 kg in 1990 to 56 kg in 2009 meaning a straight reduction in environmental effect due to more focused feeding all along the year.

**Reproductive management of the ewe lambs and their impact on productive life**

*Beltrán De Heredia, I., Bataille, G., Amenabar, M.E., Arranz, J. and Ugarte, E., Neiker-Tecnalia, Animal Production, P.O. Box 46, 01080 Vitoria, Spain; [ibeltran@neiker.net](mailto:ibeltran@neiker.net)*

The productivity of a sheep flock depends to a great extent on the reproductive efficiency, as the fixed costs are roughly the same, no matter whether sheep lamb or not. The reproductive management of the Latxa dairy sheep is very traditional, with one lambing season per year during autumn and winter. Annual replacement rates vary between 15 and 25% of the flock size. The average fertility of ewes lambs ranges between 36 and 54%, although some flocks pursue the first lambing at the age of 2 years old, affecting therefore the productivity of the system. The aim of this study was to evaluate the influence of the reproductive strategy regarding replacement lambs on their growth and productive life in the Latxa dairy breed. The data were collected within the experimental flock of Neiker-Tecnalia in Arkaute Center. The productive data corresponding to the 339 replacement lambs born between the years 2000 and 2009 were analysed depending on whether they lambed or not around the first year of life. The reproductive and productive efficiency of the females lambing at the age of 8.0 to 8.5 months, depends on their weight at mating. The reproductive and productive efficiency does not affect the growth of the female, or their subsequent reproductive performance or milk production throughout their life. Contrary to what expected, an increase in the final output obtained per animal was observed. In addition, there was an unquestionable advantage from the point of view of the breeding scheme: as their genetic index can be estimated at the end of their first lactation when they were 1.5 years-old, it allows selecting the best mothers of future generations for the following mating season. Then, there is the possibility of getting an additional generation per ewe, since the current average life expectancy of sheep in the existing commercial flocks is around 4-5 years.

# **Book of Abstracts of the 62<sup>nd</sup> Annual Meeting of the European Federation of Animal Science**



**Book of abstracts No. 17 (2011)  
Stavanger, Norway  
29 August - 2 September 2011**