Performance of the Ripollesa sheep breed under current production systems in Catalonia

Caja G.[1], Bach R.[2], Piedrafita, J. [1], Rufí,J.[2] and Casellas, J.[3]
[1]Grup de Recerca Remugants (G2R), Departament de Ciencia Animal i dels Aliments, Universitat Autònoma de Barcelona, Bellaterra; [2]ANCRI, Finca Camps i Armet, Monells, Spain ; [3]IRTA, Genetica i Millora Animal, Av.Alcalde Rovira i Roure 191, Lleida, Spain

60th Annual Meeting of EAAP (European Federation of Animal Science), 24-27 August 2009, Barcelona, Spain
S.09, Poster 29

INTRODUCTION

Ripollesa is a local sheep breed, characterized by spotted face and legs (black or brown), and intended for lamb ("xai lletó", 11 kg BW; and "xai de ramat", 25 kg BW) and wool (medium quality) production. It is exploited from old times in the NE and central Catalonia (Spain).

The aim of this work was **to update data on breed population and performance** in the typical area of production in the provinces of Girona and Barcelona.

MATERIALS AND METHODS

Flock book contained data of **9,556 ewes and rams** which were genotyped for scrapie resistance (Programa Aries) and identified with 2 plastic ear tags and 1 electronic bolus according to the Spanish requirements.

Lambing data were recorded by the farmer itself using either paper notebooks or electronic handheld readers (Rumitag, Barcelona) which introduced in a specially designed data base program (AncriData).
A total of **35,034 lambing records** collected during the last **6 yr** and from **25,524 ewes**, were processed using SAS (V. 9.1).

Distribution of Ripollesa ewes

RESULTS

Current production systems are:

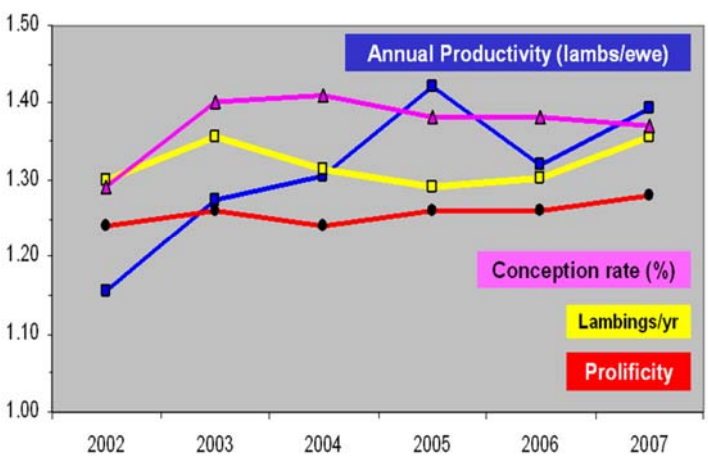
- **semi-extensive** (grazing during spring and autumn),
- **semi-intensive** (complementing in the shelter with hay and concentrate).

Average flock size for 31 farms was **468 sheep**, 70.5% of which were registered as pure breed in the ANCRI (Associació Nacional de Criadors d'ovins de raça Ripollesa) flock book.

On average, reproductive performance were:

- **Lambings per year** = **1.32** ± 0.01 (277 ± 3 d interval)
- **Prolificacy** = **1.26** ± 0.01 lambs/ewe

Prolificacy trend was +0.063 lams in 10 years, needing an effective increase in most flocks.



- **Lamb mortality** = **13.6** ± 0.5% (perinatal, 5.9%)
- **Birth weigh** = **3.8** ± 0.1 kg BW
- **Culling rate** = **15.1** ± 1.0%.

Annual productivity (lambs sold per ewe present) was **1.31 ± 0.04 lambs/ewe**, being the harvesting weight, according to market preferences, of 24.1 ± 0.10 kg BW on average. Suckling lambs ("xai lletó" of 9-11 kg BW) are a new demand for gourmet restaurants.

Scrapie genotyping for ARR homozygote and heterozygote showed frequencies of 13.4 and 43.1%, respectively, being the scrapie resistance haplotypes poorly associated to performance traits.

Current genetic selection for breed improvement focuses on prolificacy, average daily gain during the first 90 d and ARR genotype and being supported by research (UAB and IRTA) and autonomic govern (DAR) institutions.

CONCLUSIONS

Ripollesa sheep breed is a local breed well adapted to the traditional exploitation conditions, but **requiring and effective selection program** for improving its productive performance.
A special collaboration program, between farmers and research institutions, to improve prolificacy in scrapie resistant sheep is currently applied.