

Oviaragón



MANAGEMENT OF HIGH PROLIFICACY GENES IN MEAT SHEEP:

The ROA allele



iSAGE Training Course and Workshop

**INNOVATIONS TO IMPROVE SUSTAINABILITY
IN THE SHEEP AND GOAT SECTOR
(Zaragoza, Spain, from 10 to 13 December 2019)**

.... Rasa Aragonesa is a local meat sheep breed raised in extensive systems in Aragón

Phenotypic Prolificacy
= 1,37 lamb/birth
(17th catálogo
selección Upra)

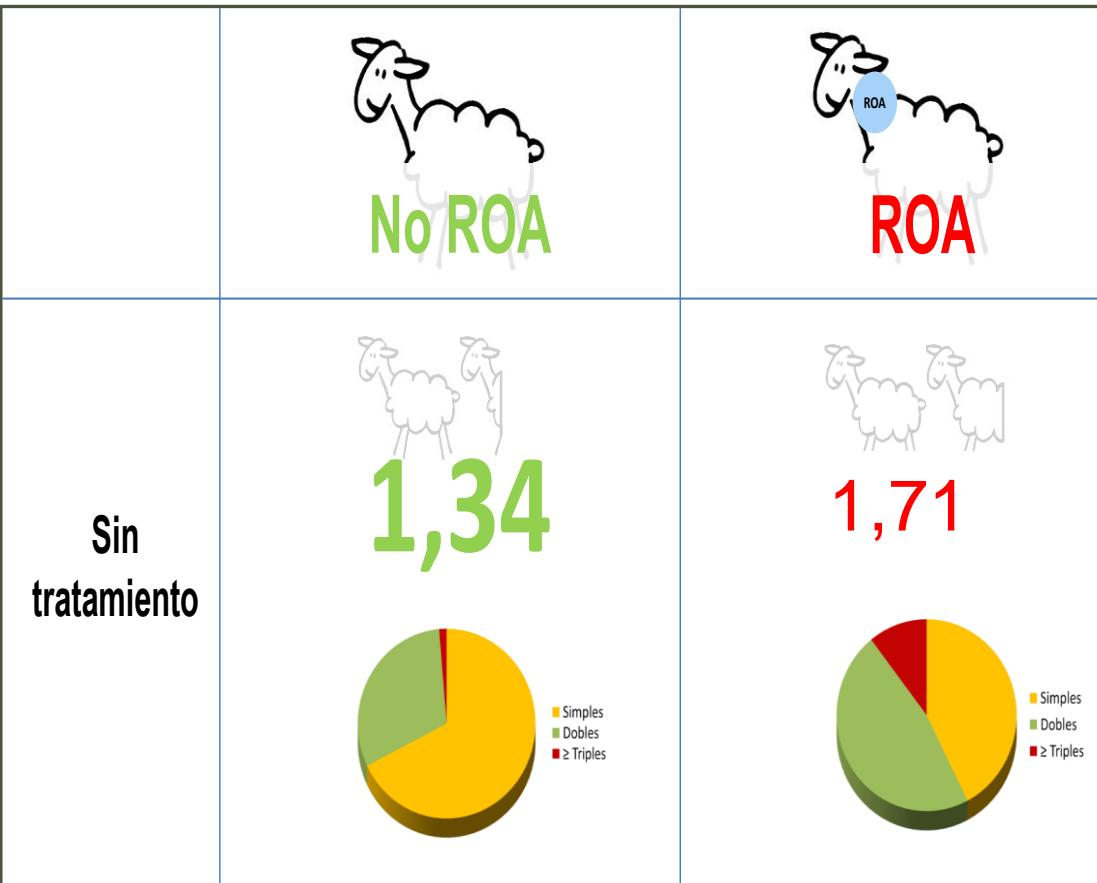
Heritability = 0,034
(Jurado et al.,2008)



Prolificacy improving is a Good way to increase the Gross Margin

| Increase of 1% in: | Gross Margin Change for sheep | Gross Margin change for UTA |
|---|-------------------------------|-----------------------------|
| Nº births for sheeo and year= X_2 | + 3,0% | + 3,0% |
| Prolificacy = X_3 | + 3,4% | + 3,4% |
| % Lambs mortality= X_4 | - 0,6% | - 0,8% |
| Average prize of the sold lamb= X_5 | + 3,6% | + 4,3% |
| € for feeding for sheep and year= X_6 | - 2,6% | - 2,7% |
| Total laboral cos = X_7 | - 1,2% | |

2007 Year: FecXR ALLELE OF BMP15 GENE



-  $X X^R$ +0,36 lambs/birth
-  $X^R X^R$ STERILITY
-  $Y X^R$ MALE R®

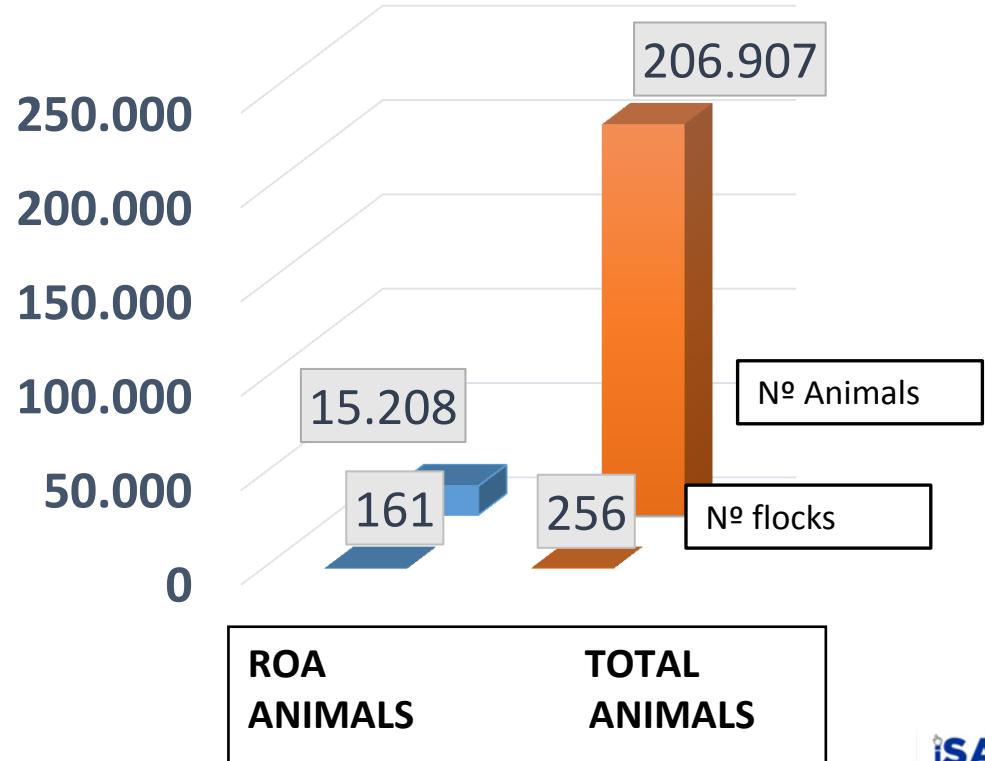


Disseminate the allele across interested farms

AI



RAMS

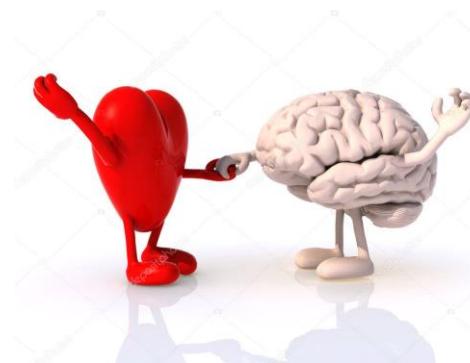


Participatory research and technology transfer

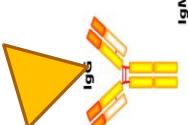
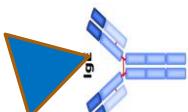
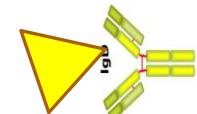
General Idea : Innovation



Concret solutions



Posibility



Profitability



Drivers and constraints for a successful implementation of the innovation



A GOOD GENETIC MANAGEMENT IS CRITICAL BECAUSE HOMOZYGOUSNESS RESULTS IN STERILITY.

KEY FACTORS ARE:

- 1-THE IDENTIFICATION OF ANIMALS CARRYING THE ALLELE
- 2-STRICT CONTROL OF PROGENY
- 3-RECORDING OF PRODUCTION DATA
- 4-WELL-ESTABLISHED HERD BOOK
- 5-GENETIC ANALYSIS OF ALL MALES



Thanks for your attention !!