

# CASE STUDY: REDUCTION OF BULK TANK SOMATIC CELL COUNT (BTSCC) AFTER VACCINATION WITH A BIOFILM-PRODUCING STAPHYLOCOCCAL MASTITIS VACCINE IN A DAIRY SHEEP FLOCK IN SPAIN.



Tamayo, J.A <sup>1</sup>; Calvo, T.M <sup>2</sup>; Sanz M. A. <sup>2</sup>.

<sup>1</sup> ADS Ovino de Campos, (Spain); <sup>2</sup> HIPRA, Amer, Girona (Spain).



## OBJECTIVES

The aim of this study was to evaluate the impact of vaccination with VIMCO® (Inactivated vaccine against Staphylococcal mastitis; HIPRA) for subclinical mastitis prevention.

## MATERIALS AND METHODS

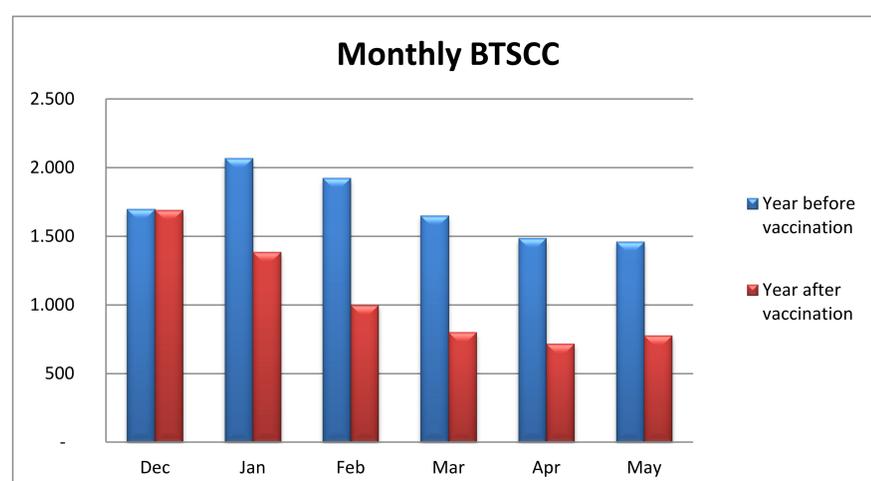
260 Assaf sheep with an average production of 345 litres per year and 2 lambing periods (December and February) were used in this study. Mass vaccination was performed in all animals in November 2015 (2 doses 2 weeks apart). No other changes occurred in the farm apart from vaccination.

Bacteriological tests were run before vaccination and 4 out of 9 animals were found positive for CNS also the tank was positive for CNS and Pseudomonas.

## RESULTS

Average monthly BTSCC was calculated monthly since vaccination for 6 months and this was compared with the same period in the previous year.

Results are shown in Figure 1.



**Figure 1.** vaccination was performed in November 2015

We observed that except in December, the monthly BTSCC was significantly lower ( $p < 0.001$ ) after vaccination. In some months (February, March, April and May) it was even reduced to half.

Calculation of the return on investment (ROI) of vaccination with VIMCO (HIPRA) was calculated taking into account milk production only. The average milk price was €0.72 per litre.

Based on bibliography (Gonzalo C. et al, 2000), we estimate that farms with a BTSCC of around 1.5 million (situation on this farm before vaccination) have a 16% loss in milk production and on a

farm with a BTSCC of around 0.75 million (situation on this farm after vaccination) the losses are around 7%. With these figures we calculate losses of 55.2 litres per year and animal before vaccination and 24.1 litres after.

The difference between both years would be around 31 litres which, translated into euros with the price mentioned above, gives €22.32 per sheep and year.

## CONCLUSIONS

It is highly important to prevent staphylococcal biofilm formation in order to control subclinical mastitis. Therefore vaccines providing a high level of immunity against this biofilm formation are good tools with which to reduce the transmission of staphylococci and new infections. Vaccination with VIMCO® reduced milk losses and the saving reached in the farm was of €22.39 per animal and per year.