

CASE OF STUDY: EVALUATION OF THE IMPACT OF MASTITIS VACCINATION ON MASTITIS TREATMENT IN A DAIRY GOAT FARM IN THE SOUTHWEST OF SPAIN.

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OBJECTIVES

Staphylococci are the main pathogens responsible for mastitis in dairy goat herds. Implementation of a mastitis control program is an essential step in improving milk quality and preventing infection. One of the measures that can be included in these control programs is vaccination. The objective of this field trial was to evaluate the efficacy of vaccination for Staphylococcal mastitis in reducing mastitis treatments.

MATERIALS AND METHODS

The study was performed in a dairy goat farm (Murciano-Granadina) where goats were vaccinated with a commercially available staphylococcal mastitis vaccine (VIMCO[®], Hipra). The farm has 550 goats and 5 kidding periods (February, April, June, September and November). The main mastitis pathogen described is Staphylococcus (CNS and S. aureus). The vaccination program started in August 2014 and was implemented according to the recommended administration schedule. The study compared mastitis treatments before (monthly average of 2 years) and after (1 year) the first immunization of the herd. No changes other than vaccination occurred during this time. Two different mastitis treatments, which were recorded monthly, were used: (A) antibiotic and nonsteroidal anti-inflammatory drugs (NSAIDs) for severe mastitis and (B) nonsteroidal anti-inflammatory drugs for mild mastitis. Total treatment (A+B) was also calculated.

RESULTS

The number of mastitis treatments per year before vaccination was 88 in group A, 50 in group B, and 138 in the A+B groups combined. After vaccination the number of treatments recorded was 61 in Group A, 5 in Group B and 65 in Groups A+B (Figure 1).

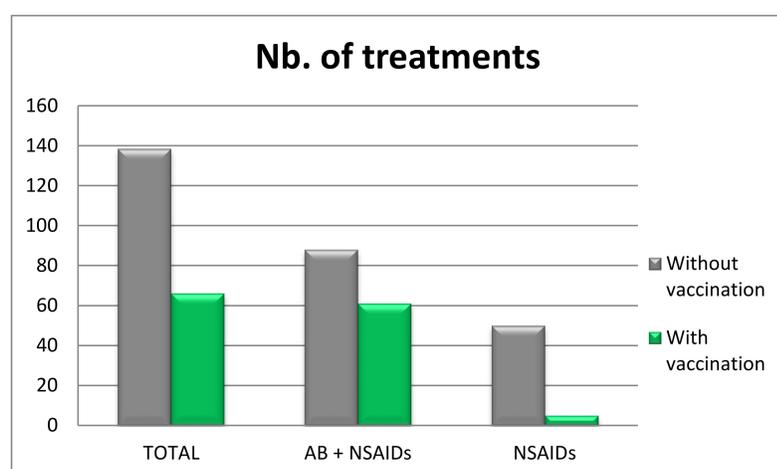


Figure 1. Number of treatments (by severity) comparing before and after starting vaccination.

Overall, fewer mastitis treatments (A, B and A+B) were required after starting vaccination than before (-31%, -90% and -52%, respectively). The total reduction in treatments (A+B) from before to after vaccination program was introduced was as follows: September (-25%), October (-44%), November (-92%), December (-40%), January (-24%), February (-85%), March (-33%), April (-20%), May (5%), June (-11%), July (-68%), and August (-88%).

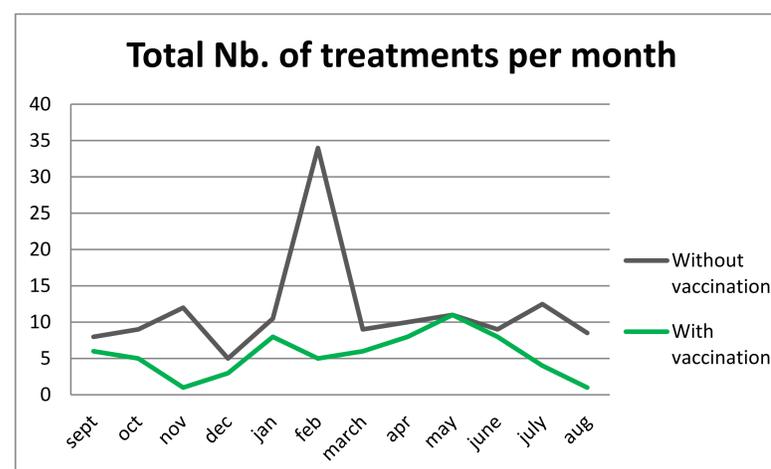


Figure 2. Number of treatments per month comparing before and after starting vaccination.

CONCLUSION

Results show that vaccination against Staphylococcal mastitis with VIMCO[®] can effectively minimize the amount of mastitis treatments (antibiotics and NSAIDs) in the herd. Furthermore, the drop in mastitis treatments was associated with a reduction in mastitis cases. These results suggest that including vaccination in a mastitis control program may be a good approach to prevent the disease and reduce the use of mastitis treatments, thereby improving milk quality and public health.