EFFICACY OF THE VACCINE STARTVAC® IN AN AUSTRIAN DAIRY HERD

Hofer J. [1], K. Gigler K. H.[1], Mansfeld D. [2],
Herd health services for farm animals of Carinthia, Klagenfurt, Austria[1]
Institute for Food Safety and Veterinary of Carinthia, Klagenfurt, Austria[2]

INTRODUCTION

The importance of subclinical mastitis of *Staphylococcus aureus* is very high. The presence of subclinical mastitis of *Staphylococcus aureus* in Carinthia and in the other areas in Austria is nearly 30 % of the bacteriological findings. The cow associated transfer and the clinical characteristics make the reduction of the subclinical infections with this bacterium very important for herd health and the efficiency of milk production.

OBJECTIVE

The objective of this study was to evaluate the clinical effect and show the microbiological reduction of the positive findings of *Staphylococcus aureus* and the protection of the heifers challenged with STARTVAC© in a dairy herd. This HIPRA vaccine mechanism is based on *Staphylococcus aureus* SP140 strain expressing Slime Associated Antigenic Complex (SAAC).

MATERIAL AND METHODS

In a dairy farm 18 lactating dairy cows (Simmental FV) with an average milk yield of 6,800 litres per cow *Staphylococcus aureus* was detected. Bacteriological status starting the project was positive in 58 udder quarters of 72 totally. All udder quarters were examined by palpation and by California Mastitis Test (CMT). The bacteriological investigations were monitored in 2 month intervals over the period of one year.
The vaccine STARTVAC© was used at 3 times according to the manufacturer's suggested schedule. All heifers were also included in the vaccine program. The cell account and cell number of individual animals was recorded and evaluated. No corrections were made at the general milking procedure. Only a hygiene program with intermediate cleaning and desinfection of the teat cup liner was carried out and the animals were dipped over a short period of 3 months. 4 animals were subjected to antibiotic treatment.

RESULTS

In the bacteriological study after the first part of vaccination could already be found a reduction of the positive findings of *Staphylococcus aureus*. After 1 year starting the vaccine program individual somatic cell count decreased significantly. The bacteriological detection rate of *Staphylococcus aureus* after one year decreased from 58 positive bacteriological findings to low level (Figure. 1). The average somatic cell count values of the operation significantly decreased (Figure. 2)

Figure 1. Bacteriological detection rate of *Staphylococcus aureus.*

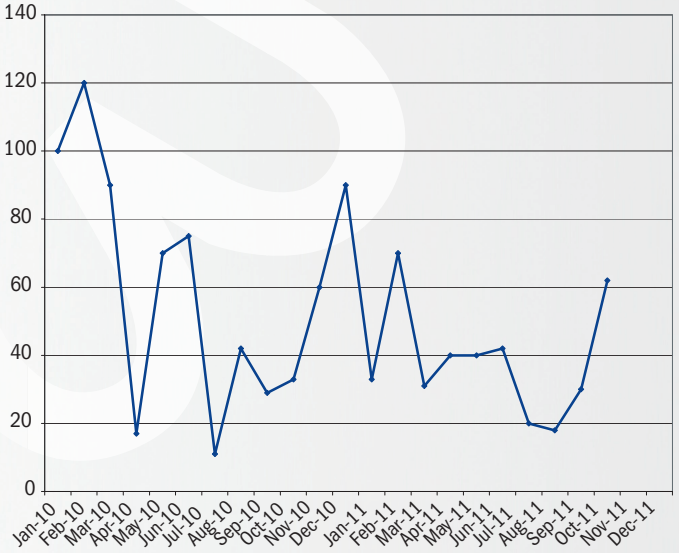
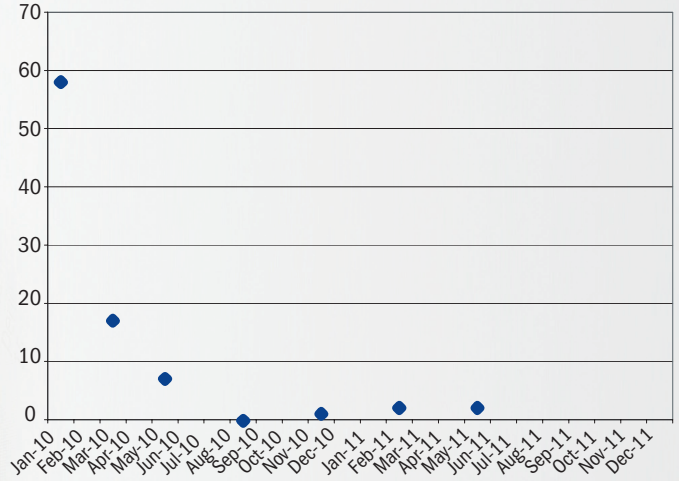


Figure 2. Evolution of somatic cell count (x 10,000 cells/ml)



CONCLUSIONS

The reduction of *Staphylococcus aureus* herd problems is possible by combining several measures in dairy units. The use of the vaccine STARTVAC© seems to be an effective measure to reduce *Staphylococcus aureus* infection rate and to reduce individual somatic cell count significantly.

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