COLIFORM MASTITIS: HERD CONTROL PROGRAM
FIELD EXPERIENCE

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OBJECTIVE

The aim of this study was to analyse during one year different factors that may lead to high prevalence mastitis caused by coliform bacteria in dairy herd and follow control program decisions in order to control the disease to analyse.

INTRODUCTION

Mastitis is described as an intramammary gland inflammation, and it represents the most important factor that leads to milk production losses and impaired milk quality. The most relevant mastitis cause is intramammary infection caused by different pathogens.

MATERIAL AND METHODS

The dairy herd is located in A Coruña (Northern region of Spain). A total of 240 milking cows were part of this study. Animals are free stall housed, sawdust bedding with added calcium carbonate and are milked in a 12 x 2 milking parlour.
A milk quality program in this herd has been running since 2002. Average bulk tank somatic cell count (BTSCC) was lower than 200,000 cells/ml with no acute or hyper-acute mastitis symptoms. Clinical mastitis rate was always lower than 3%.
All data are introduced in an IT system and regularly updated. Every month a report is made by the milk quality services and new advices are given in order to improve herd management and milk quality. Different critical points are considered: milking routine follow up, milking machine revision, feeding management, cow comfort and rate incidence for mastitis control.
In 2010 there was a coliform mastitis outbreak (*Escherichia coli*) with high incidence and marked acute and hyperacute symptomatology. In some occasions, chronic animals registered BTSCC of 1,000,000 cells/ml and represented more than 5% of total milking cows.
Evaluations done monthly on critical points never showed a determinant effect that could be causing the coliform mastitis outbreak, so the responsible veterinarian together with the dairy farmer decided to try mastitis vaccination (STARTVAC®) as part of the milk quality program.
Blanket vaccination for all herd was performed. First application was on July 2010 and second application three weeks after. Every four months boost vaccination was also performed.

RESULTS AND DISCUSSION

(First vaccine application was on July 2010 – soft blue graph bars).
(In August there was no Milk Quality services assessment).

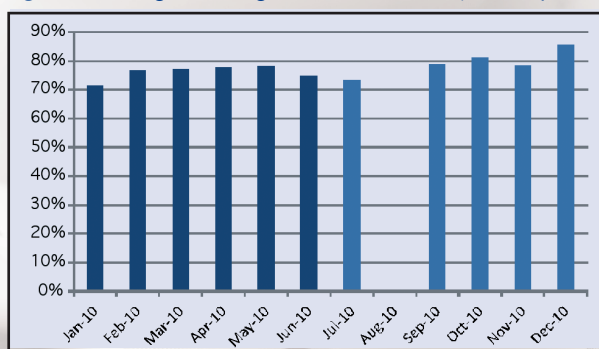**Figure 1.** Percentage of lactating cows with **BTSCC < 200,000 cells/ml.**

Figure 2. Percentage of lactating cows with **BTSCC > 200,000 < 400,000 cells/ml.**

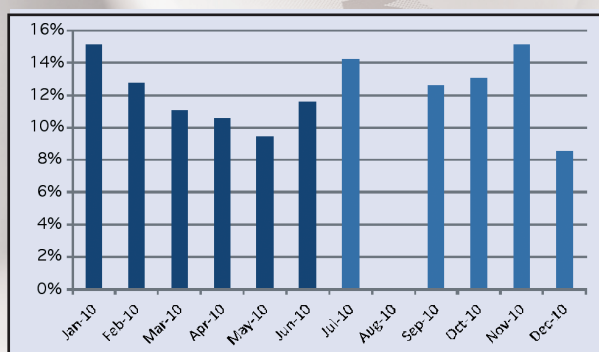

Figure 3. Percentage of lactating cows with **BTSCC > 400,000 < 1,000,000 cells/ml.**
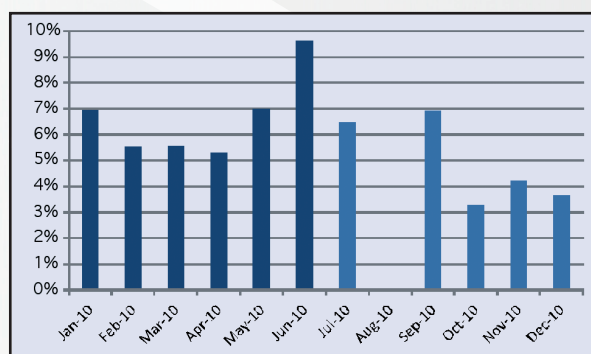

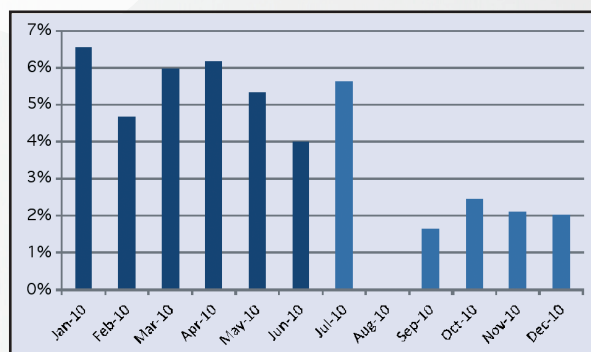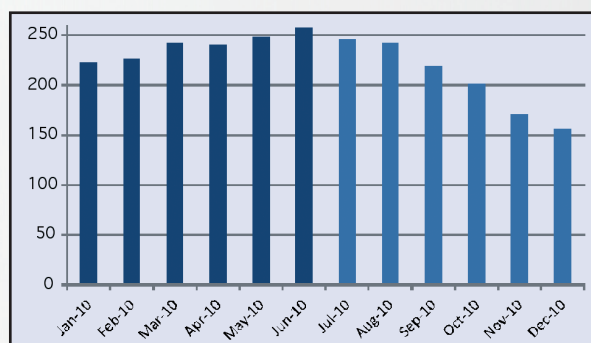**Figure 4.** Percentage of lactating cows with **BTSCC > 1,000,000 cells/ml.**

Figure 5. BTSCC average from January to December 2010 (x 1,000 cells/ml).

CONCLUSIONS

1. Vaccination with STARTVAC® showed to be effective in controlling the dairy herd colimastitis outbreak:
   a. Number of healthy cows has increased (BTSCC < 200,000 cells/ml) after 6 month vaccination period.
   b. Number of infected animals has decreased (BTSCC > 200,000 cells/ml).
   c. Number of chronic animals (BTSCC > 400,000 cells/ml) has also decreased.
2. Consequently acute and hyperacute symptomatology has decreased drastically.
3. BTSCC decreased from 246,000 cells/ml to 210,000 cells/ml.

ACKNOWLEDGEMENTS

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SCHMITT, E., 2011. Startvac® new vaccination protocol implementation: preliminary data in ten different herds in the French northwest region. European College of Bovine Health and Management.