



# BULK TANK MILK SOMATIC CELL COUNT AND *STAPHYLOCOCCUS AUREUS* CONTROL THROUGH MANAGEMENT IMPROVEMENT IN AN ITALIAN DAIRY HERD

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Mastitis is the main cause of economic loss in milk production [2] and *Staph. aureus* is responsible for a large proportion of bovine intramammary infections (IMI) worldwide [1]. Current control measures are not always efficient and often lead to chronic infections and recurrent clinical onsets with persistent bacterial reservoir within a herd. A good herd health management combined with vaccination against *Staph. aureus* IMI, could be a rational implementation for IMI control [3; 4].

In this case-report data from bulk tank milk somatic cell count (BTMSCC) and milk bacteriological analysis are reported. These data concerning a period of 18 months of an Italian dairy farm, where a constant increase in BTMSCC was observed in first six months of 2010.

## MATERIALS AND METHODS

The farm is located in Northern Italy, consisting of about 140-160 lactating cows, free stall housed and laying on cubicles with straw bedding (Image 1). Screening individual milk samples, performed during previous years, never showed presence of *Staph. aureus* IMI. A constant increase in BTMSCC was recorded in the first six months of 2010, reaching 650.000 cells/ml at July DHI, after some heifers purchasing. Following this problem, from 24 cows with high somatic cell count (SCC) quarter milk samples were taken in July 2010 and all turned out with *Staph. aureus* IMI. Following bacteriological results, a general revision of herd and milking management was carried out. During monitored period 36 cows were culled in July 2010 (18 were *Staph. aureus* positive) and other 6 in February 2011 (all were *Staph. aureus* positive). In addition, from the end of July 2010, a blanket vaccination with Startvac<sup>TM</sup> every 4 months was applied.



Image 1 – Cubicles view

## RESULTS

BTMSCC showed a constant decrease after interventions in farm management and reached stable values below 250.000 cells/ml (Fig. 1). 92 quarter milk samples, collected from 23 cows with high SCC, in December 2010, showed 26 (28,3 %) *Staph. aureus* positive samples. Composite milk samples collected in September 2011 on a random group of 20 % of animals did not show any *Staph. aureus* IMI.

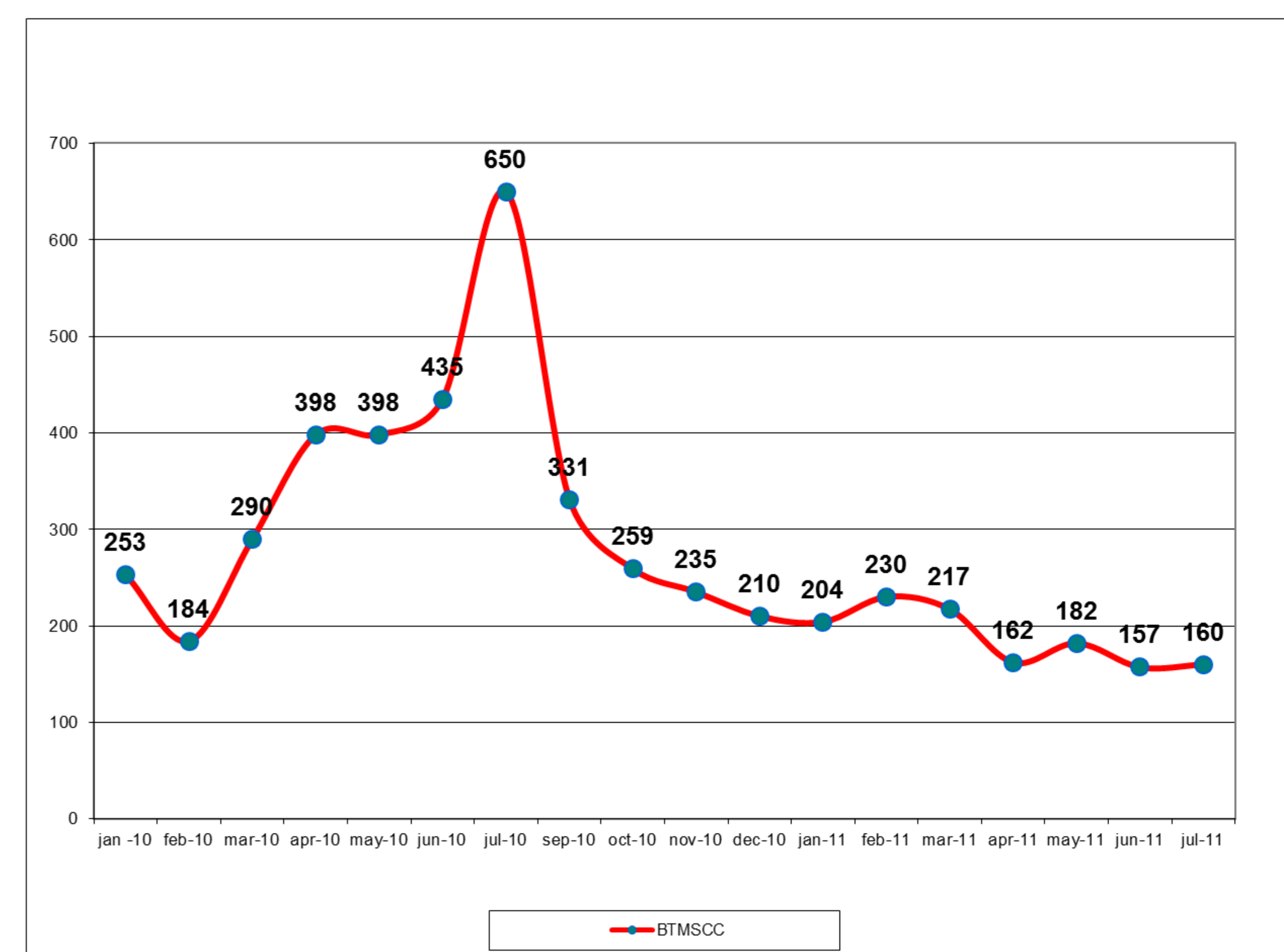


Figure 1 – SCC trend (18 months)

Several strategies are known for control *Staph. aureus* IMI in dairy farms. They mostly consist of general management measures and specific decision-making at an individual animal level. The results of this case-report showed that a good herd health management combined with vaccination against *Staph. aureus* IMI, could be a rational implementation for IMI control.

## REFERENCES

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