

INCIDENCE OF MASTITIS BEFORE AND AFTER VACCINATION AT A FARM IN NORTHERN SPAIN

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OBJECTIVES

The objective of this paper is to document the results obtained from one field experience using a vaccine for mastitis (STARTVAC®, LABORATORIOS HIPRA, S.A. SPAIN), to assess its efficacy at a dairy cattle farm with 140 cows in northern Spain.

MATERIALS AND METHODS

120 lactating cows and 20 dry cows in a farm with 2 milking robots were used for this trial.

The main mastitis related pathogens were: *Staphylococcus aureus*, *Escherichia coli* and *Streptococcus uberis*. 1 dose (2ml) of the vaccine was administered to all cows the same day. 21 days later all animals were revaccinated. Thereafter, a booster was given every 3 months to all cows.

Milk production and bulk tank milk somatic cell count were evaluated every two days one year before and after vaccination. New infections rate, cure rate and % of chronic cows were analyzed, during lactation and at dry off, using the individual Somatic Cell Count (SCC) data from the Monthly Milk Record. As agreed by the scientific community, the threshold of 200,000cells/ml was established in order to differentiate healthy udders from infected ones.

RESULTS

Milk yield per cow and day was 20L before vaccination and 29.22L after vaccination. Milk yield per lactating cow and day was 31L before vaccination and 32L after vaccination (Figure 1). The average SCC before vaccination was 236,000 cells/ml and after vaccination it was 195,000 cells/ml (Figure 2).

New infections decreased in first lactation cows from 8.45% to 5.25%. In adult cows, new infections decreased from 15% to 8.25% and, at dry-off, they decreased from 20% to 8.5% (Figure 3).

The cure rate during lactation in heifers rose from 42.6% before vaccination to 60% after vaccination but in adult cows this trend was the opposite, from 36.6% to 30%. At dry-off the cure rate raised from 38% before vaccination to 91% after it (Figure 4).

Finally, the percentage of chronic cows went down from 6% to 3.5% in heifers, from 20% to 16.5% in adult cows and from 17% to 2.5% at dry-off.

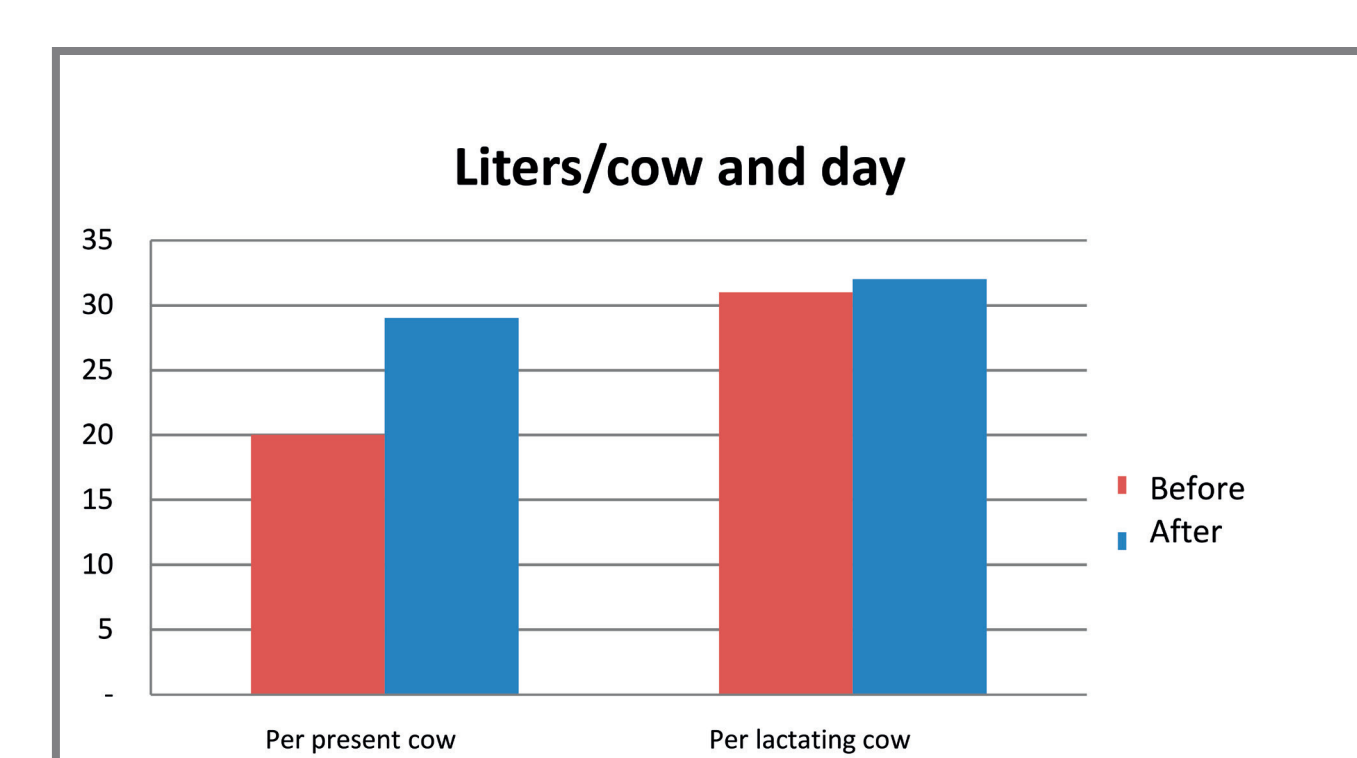


Figure 1. Liters/cow and day.

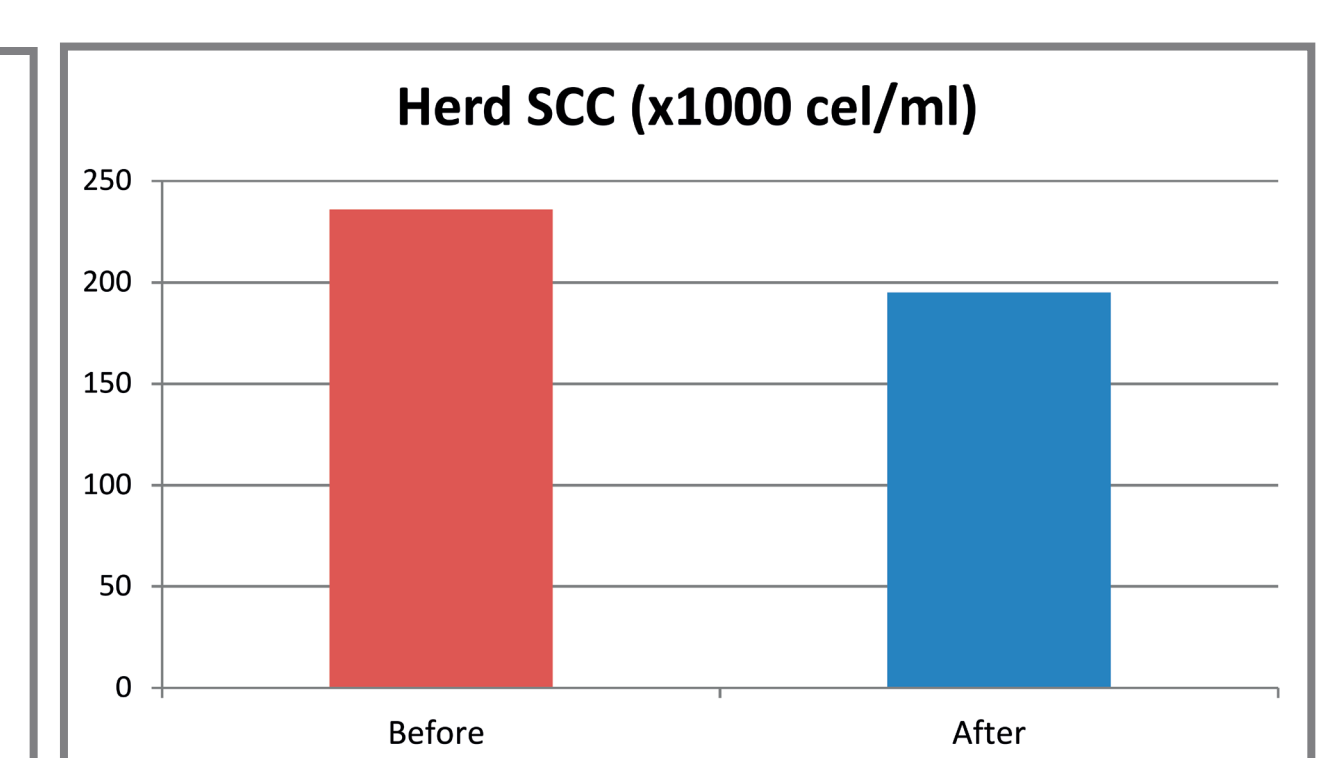


Figure 2. Herd SCC.

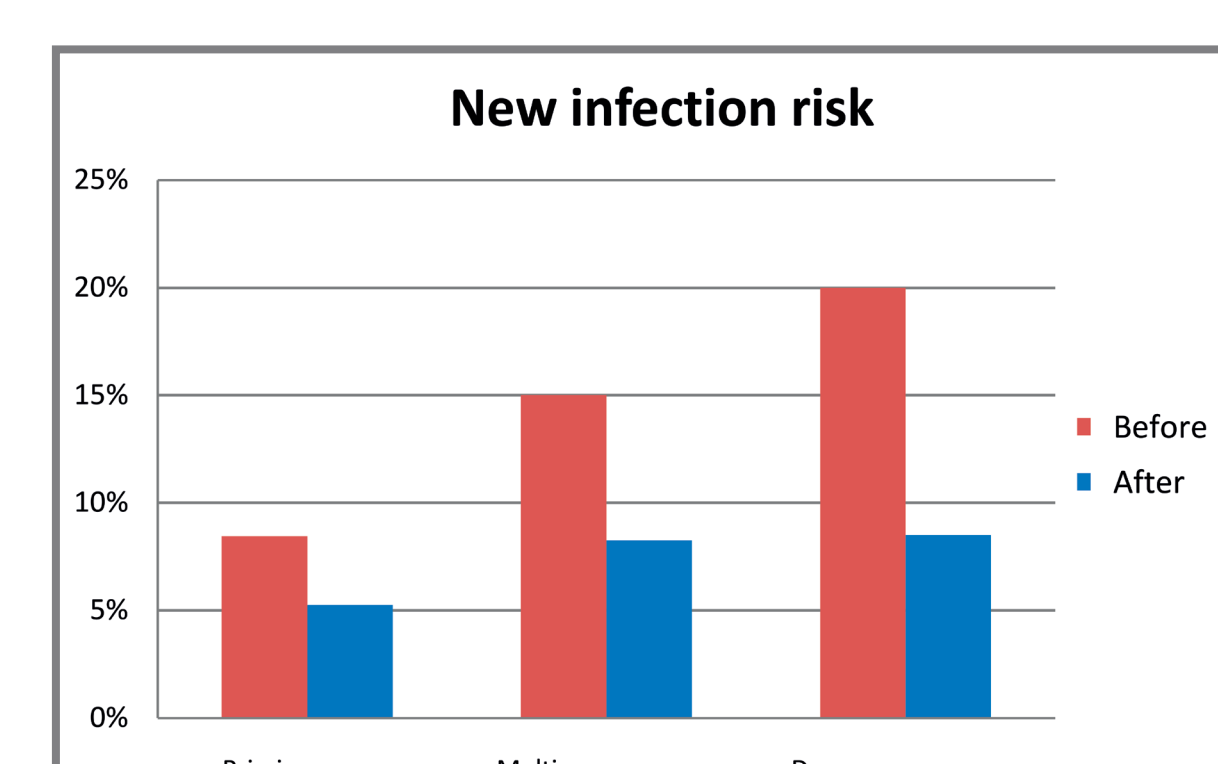


Figure 3. New infection risk.

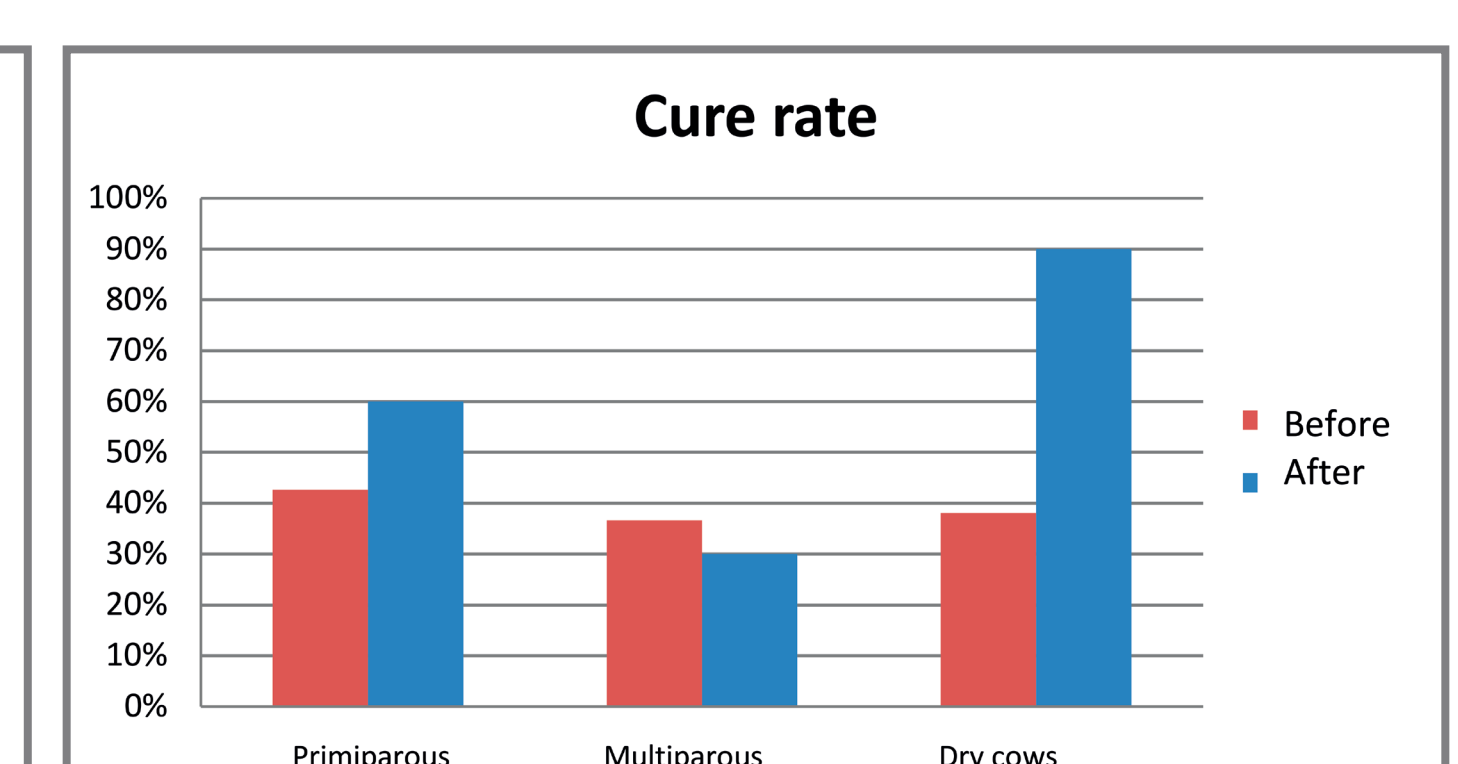


Figure 4. Cure rate.

CONCLUSIONS

Vaccination was successful in this farm. Milk production and cure rate at lactation, in heifers and at dry-off, cure rate at lactation, in heifers and at dry-off, increased after vaccination. New infections decreased after vaccination and cure rate in heifers and at dry-off improved.