

ECONOMIC IMPACT OF STARTVAC® USE IN A PORTUGUESE DAIRY HERD



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INTRODUCTION

Clinical mastitis (CM) is one of the biggest problems in dairy herds. According to Blowey, 1995, mastitis has an economic impact on farmers with indirect costs (discarded milk, treatments and veterinary services) and with direct costs (production losses, penalty for high somatic cell count (SCC), extra labor, replacement and animal deaths). Consequently, new strategies must be developed in order to improve the cost/benefit ratio for producers. Several tools are available on the market that help increase animals' immunity. In this study, the main purpose was to evaluate the economic impact of the use of a commercial inactivated bovine mastitis vaccine (STARTVAC®), available since 2009, indicated against *Staphylococcus aureus*, coagulase negative Staphylococci and coliforms.

OBJECTIVE

The objective of this trial was to determine the clinical efficacy of a commercial bovine mastitis vaccine (STARTVAC®) and its cost-benefit effectiveness, on a dairy farm with CM problems.

MATERIAL AND METHODS

A total of 200 dairy cows were vaccinated in a Portuguese herd. All lactating animals were vaccinated, and so were the rest of the animals that were supposed to be calving in the three following months, including heifers. A three month follow up was performed between June and August 2011. Monthly data were recorded regarding the effect of vaccination. According to records available on the dairy herd, a comparison with the previous year (2010) was done regarding the following parameters: bulk tank milk SCC, number of infected quarters, number of infected animals and death due to severe CM cases. During the trial period, herd management stayed the same; no new measures were introduced, such as animal replacement.

RESULTS

An improvement in bulk tank milk SCC, number of infected quarters, number of infected animals and death due to severe CM was observed. During the same period in 2010, one case of an animal death event was registered due to severe CM; in 2011 there was none. To calculate the economic impact, a study performed in Portugal was taken as reference, by Aires, 2010, in that the estimated cost of mastitis case/cow/year was 249 EUR. During the evaluation period in 2011, there were less than 14 cases of CM compared to the same period in the previous year, which translated into a 3,486 EUR gain for the dairy herd.

Figure 1. Bulk tank milk SCC evaluation after a three month STARTVAC® vaccination follow up in 2011 compared to the same period in the previous year (x 1,000 cells/ml).

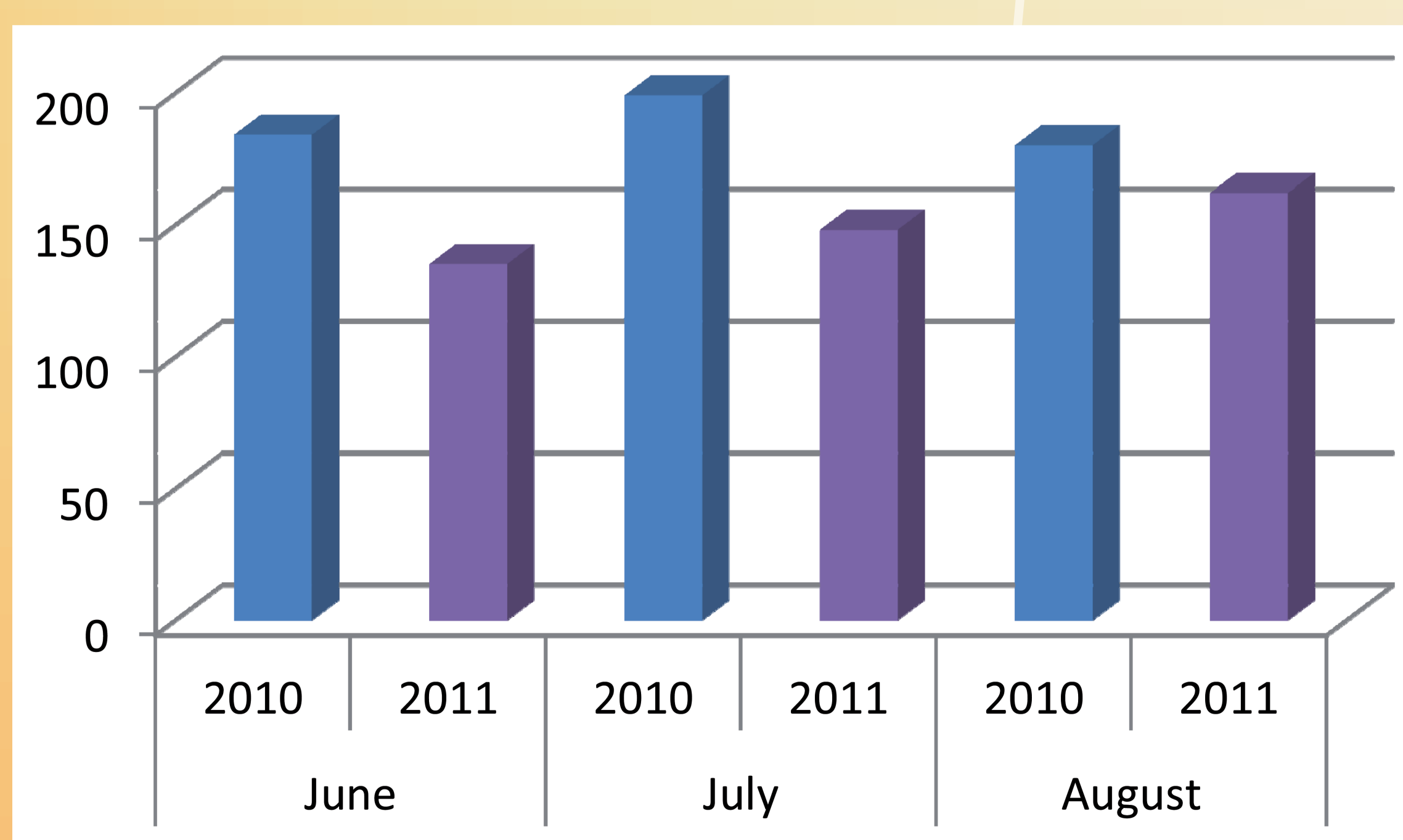


Figure 2. Numbers of infected quarters after a three month STARTVAC® vaccination follow up in 2011 compared to the same period in the previous year.

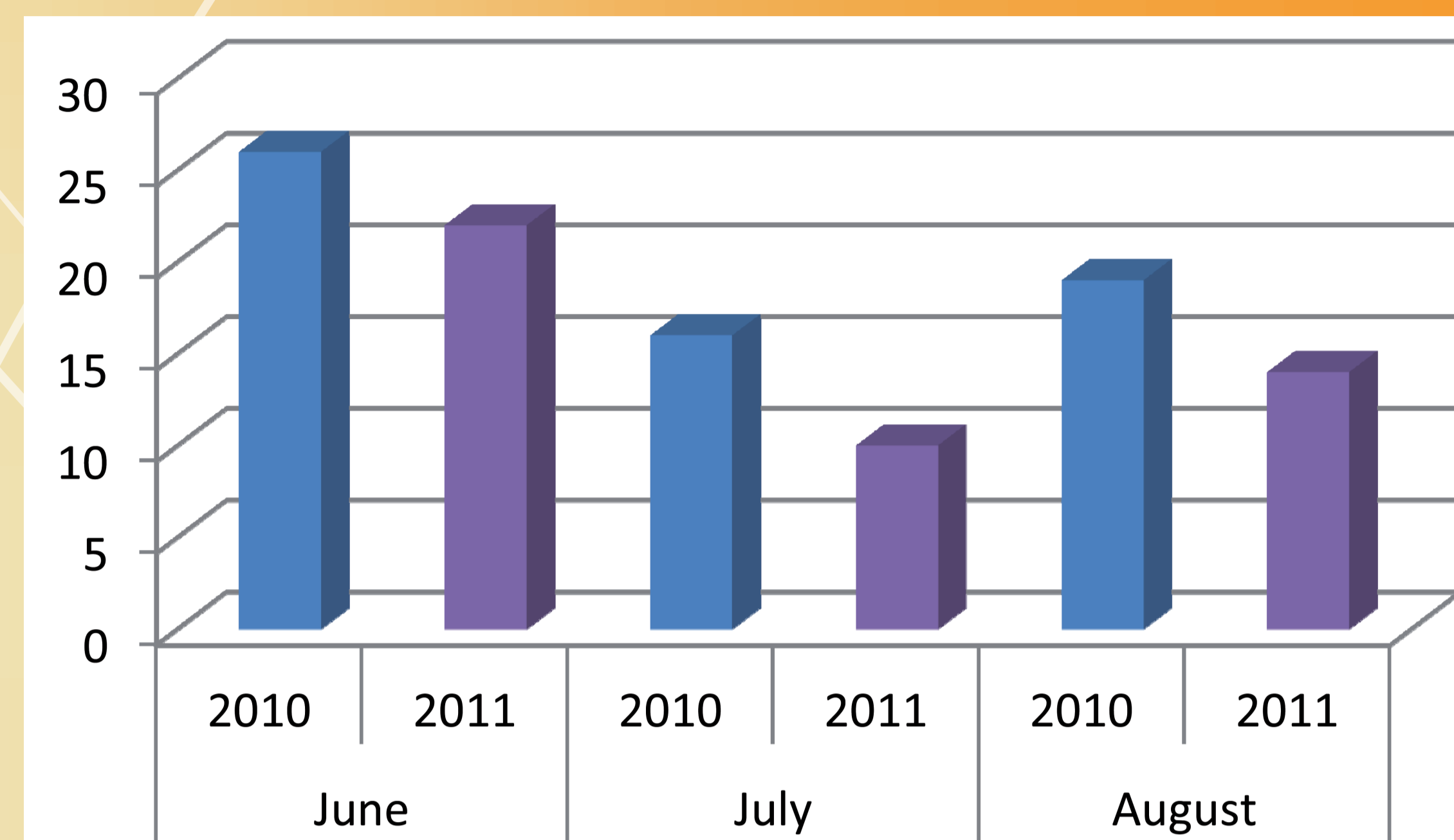


Figure 3. Numbers of infected animals after a three month STARTVAC® vaccination follow up in 2011 compared to the same period in the previous year.

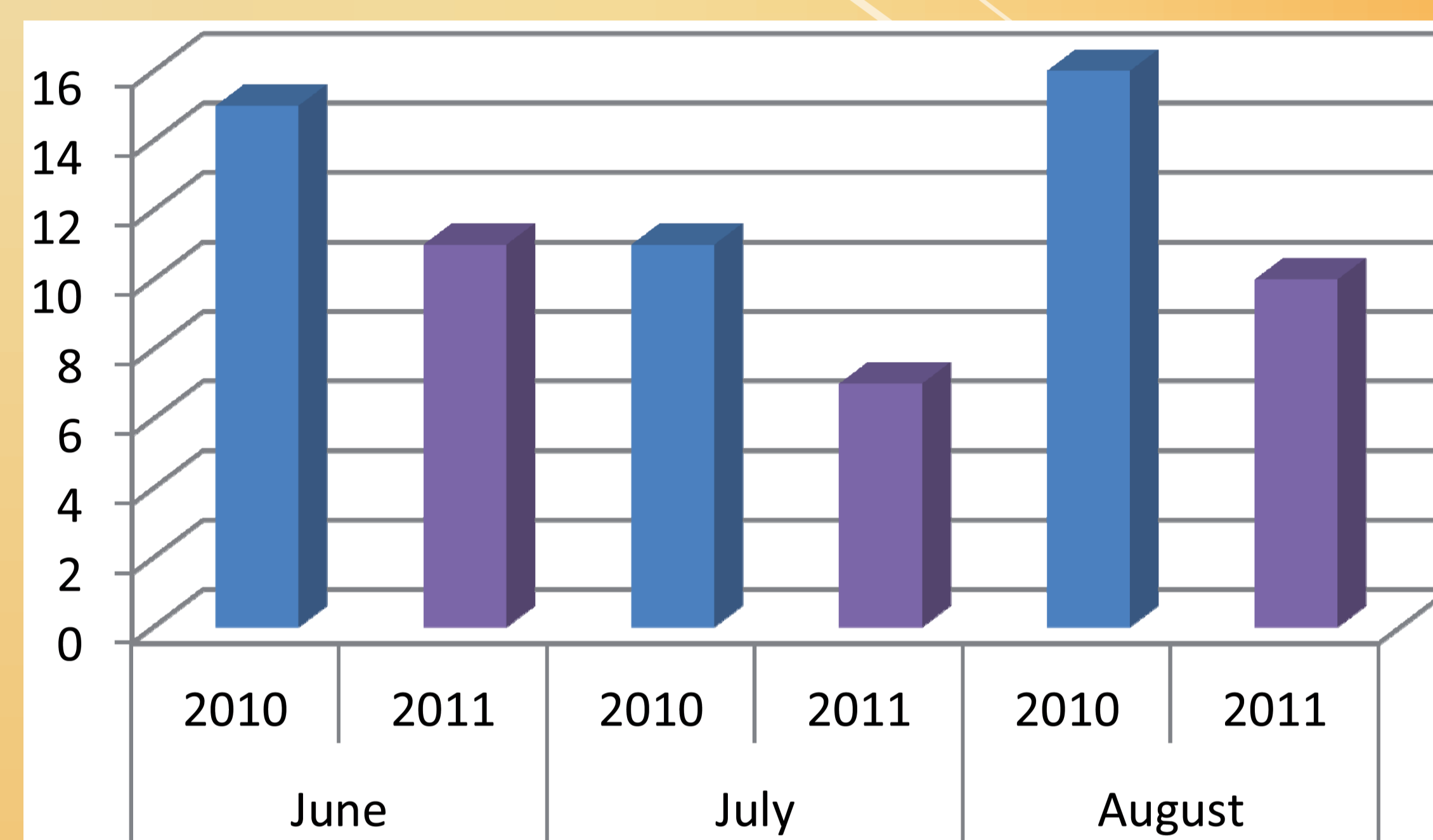
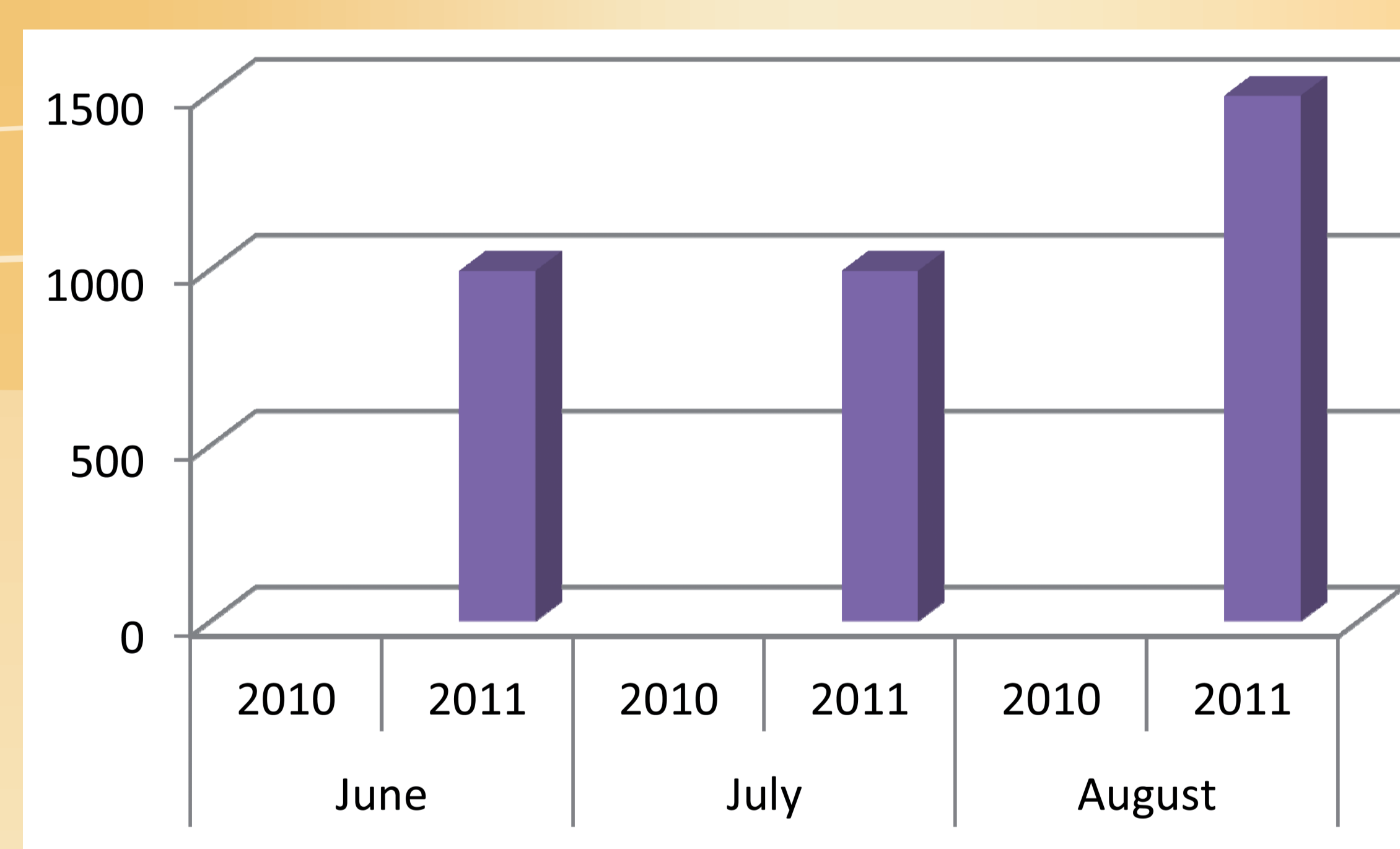


Figure 4. Net profit after a three month STARTVAC® vaccination follow up in 2011 (EUR).



CONCLUSION

The results obtained showed that the use of STARTVAC® reduced the number of CM in the dairy herd. Vaccination led to lower bulk tank milk SCC's during the period of analysis.

REFERENCES

- Aires, Túlia (2010); *Mastites em Bovinos: caracterização etiológica, padrões de sensibilidade e implementação de programas de qualidade do leite em explorações do Entre-Douro e Minho*
- Blowey, Roger; Edmondson, Peter (1995); *Mastitis Control in Dairy Herds*