

Biosecurity and vaccination as effective tools to handle an PRRSV outbreak.



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INTRODUCTION

This report describes a case where higher number of stillbirths, weak piglets and therapy-resistant piglet diarrhoea occurred in a sow herd. In the affiliated barn for weaned pigs, an increasing number of animals showed diarrhoea and respiratory disease.

MATERIALS AND METHODS

The herd with 560 sows is located in Lower Saxony, Germany. The herd is managed comprising seven groups with three weeks intervals between the farrowing batches and a suckling period of four weeks. The piglet rearing is located about 500 meters from the sow barns on the opposite side of the road.

The sows are vaccinated against parvovirus, *Erysipelothrix rhusiopathiae* (Porcillis® Ery + Parvo) and PRRSV (Porcillis® PRRSV). The piglets receive vaccinations against PCV2 and M.hyo (Porcilis® PCV MHyo), PRRSV (Porcillis® PRRS) and *Escherichia coli* (ECOPORC SHIGA, Coliprotec® F4/F18).

Based on the clinical signs investigations of tissue samples were performed to identify specific pathogens such as PRRSV (porcine respiratory and reproductive disease virus).

PCR based investigations revealed evidence of a PRRSV field strain. Sow mass vaccination for PRRSV (every 3–4 months) was maintained, but the vaccine was changed to a special sow vaccine (ReproCyc® PRRS EU). Also the piglets received a novel special piglet vaccine (Ingelvac PRRSFLEX® EU) in the third week of life. In addition, improvements have been implemented to individual biosecurity measures, such as the renewal of the biofilter in the nursery. These adjustments resulted in an immediate halt of clinical symptoms.

RESULTS

From January 2016 onwards, the performance data showed a decline in recurrences of estrus by 1.8%. The results of the first three batches after the introduction of the new vaccination protocol cannot clearly be assigned to either effect of the old or possible side effect of the new vaccine so they need to be viewed as transition period. Until October 2017 the average number of sows returning to estrus stabilized at 7.9%, while it used to be at 10.6% in the period before (Fig. 1). Weaning data were available until July 2017: the number of piglets born alive slightly decreased by 0.27 piglets per litter (Fig. 2), however the number of weaned pigs remained more or less constant (-0.16) (Fig. 3), because pre-wean mortality was slightly improved (-1.0%) (Fig. 4).

Fig. 1: percentage of returns to estrus before and after

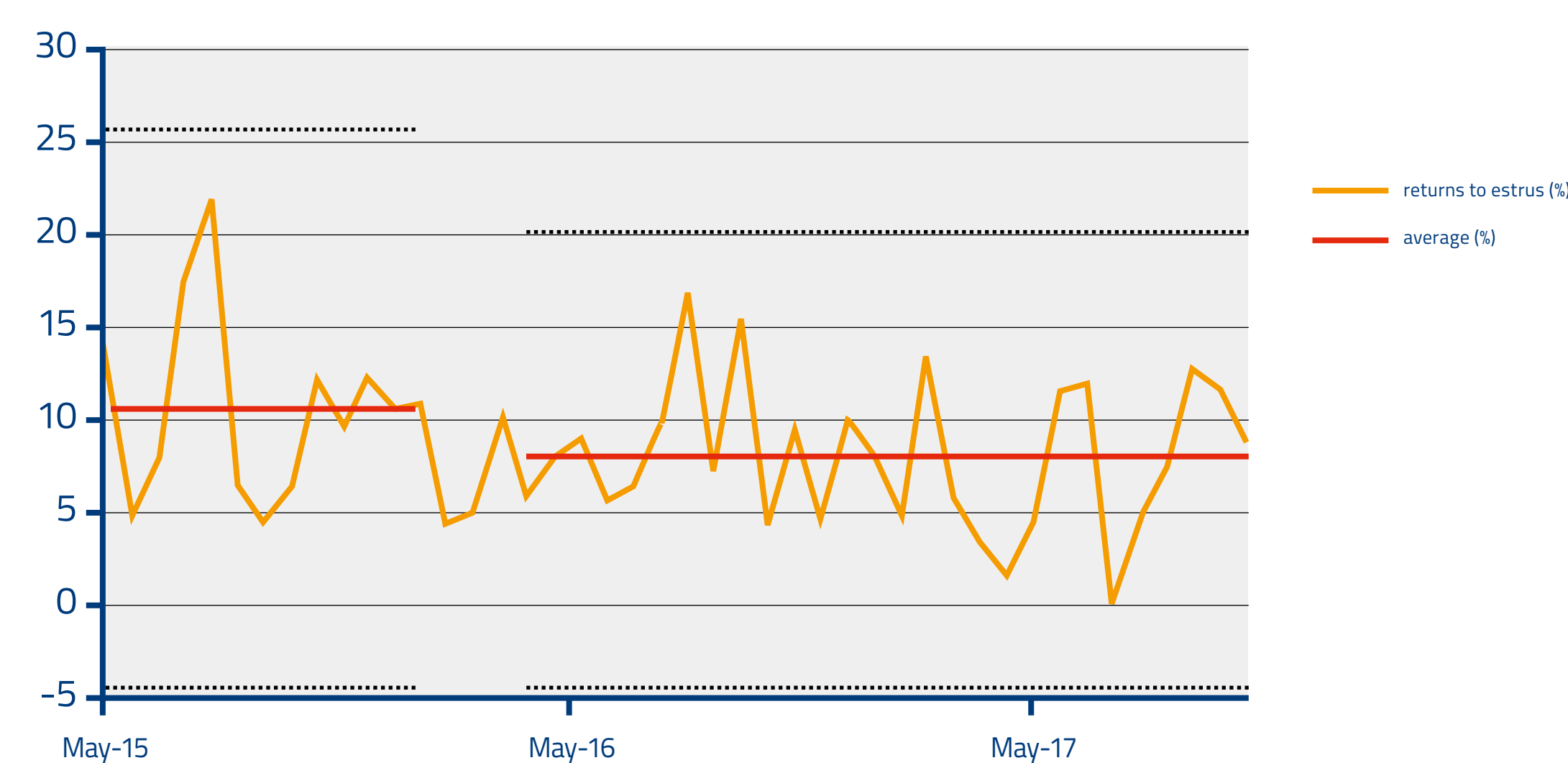


Fig. 2.: piglets born alive per litter

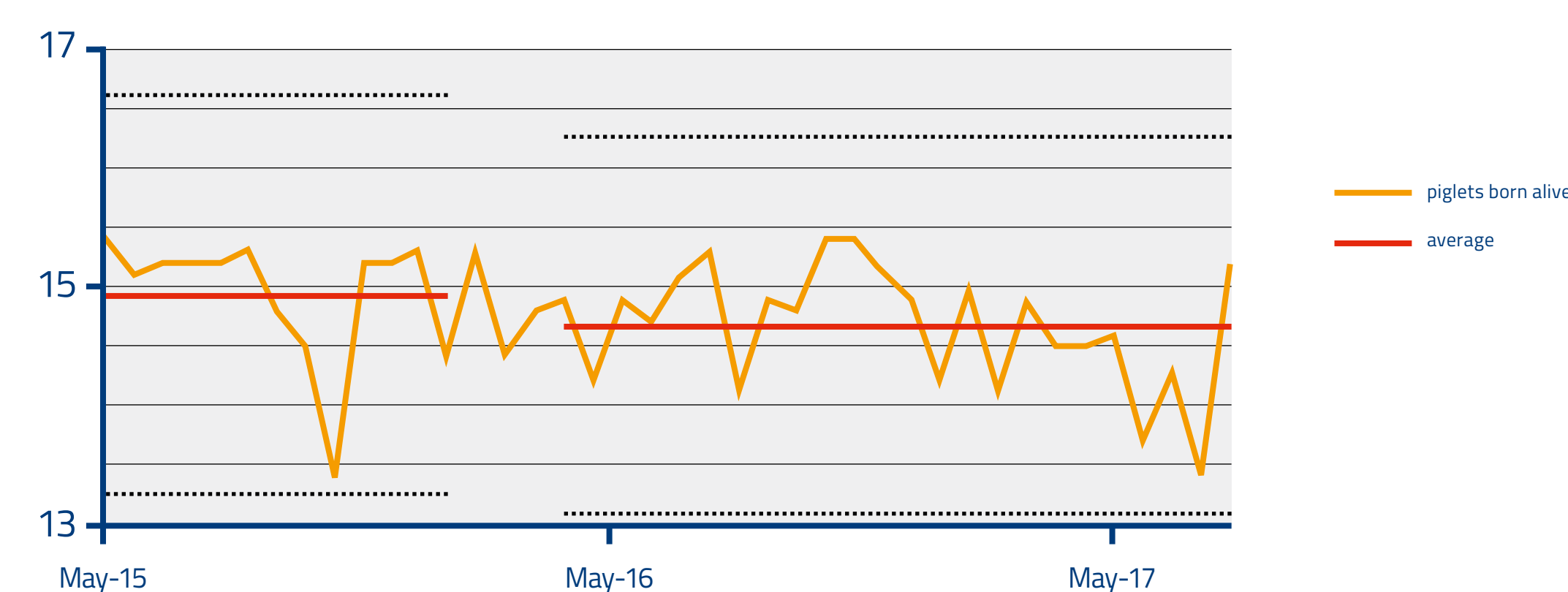


Fig. 3.: piglets weaned per litter

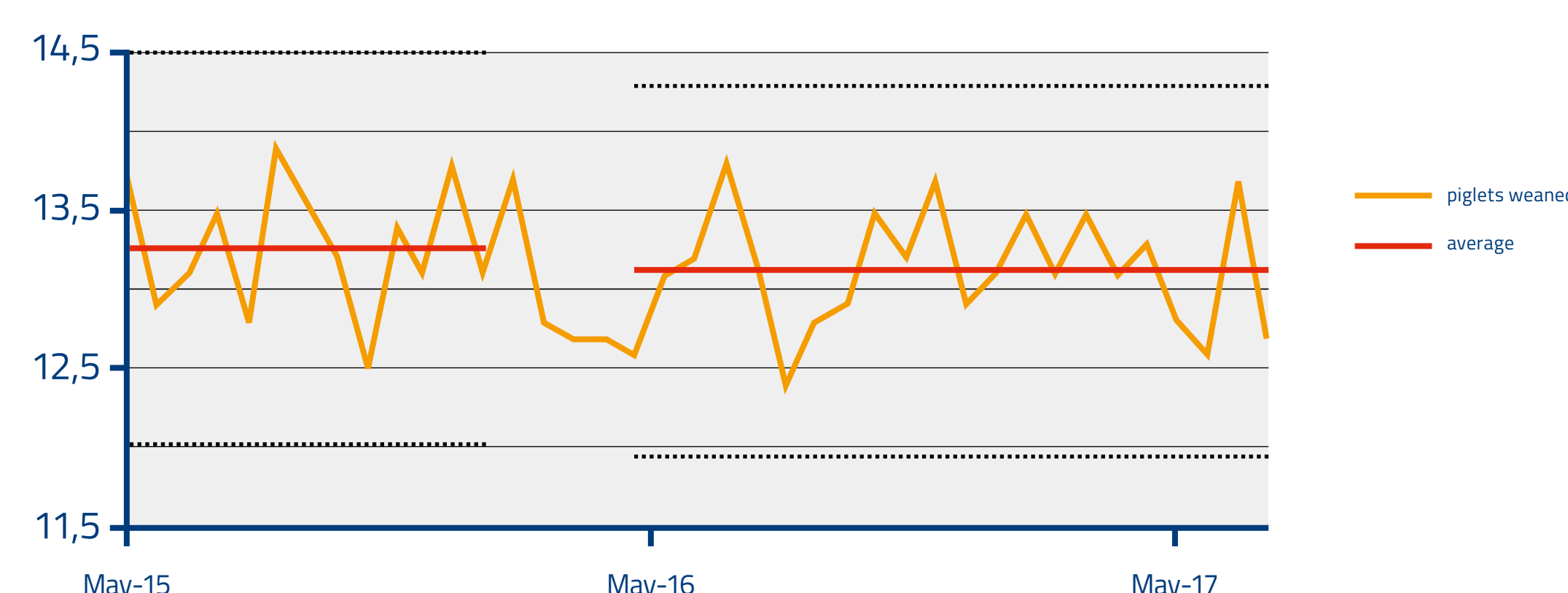
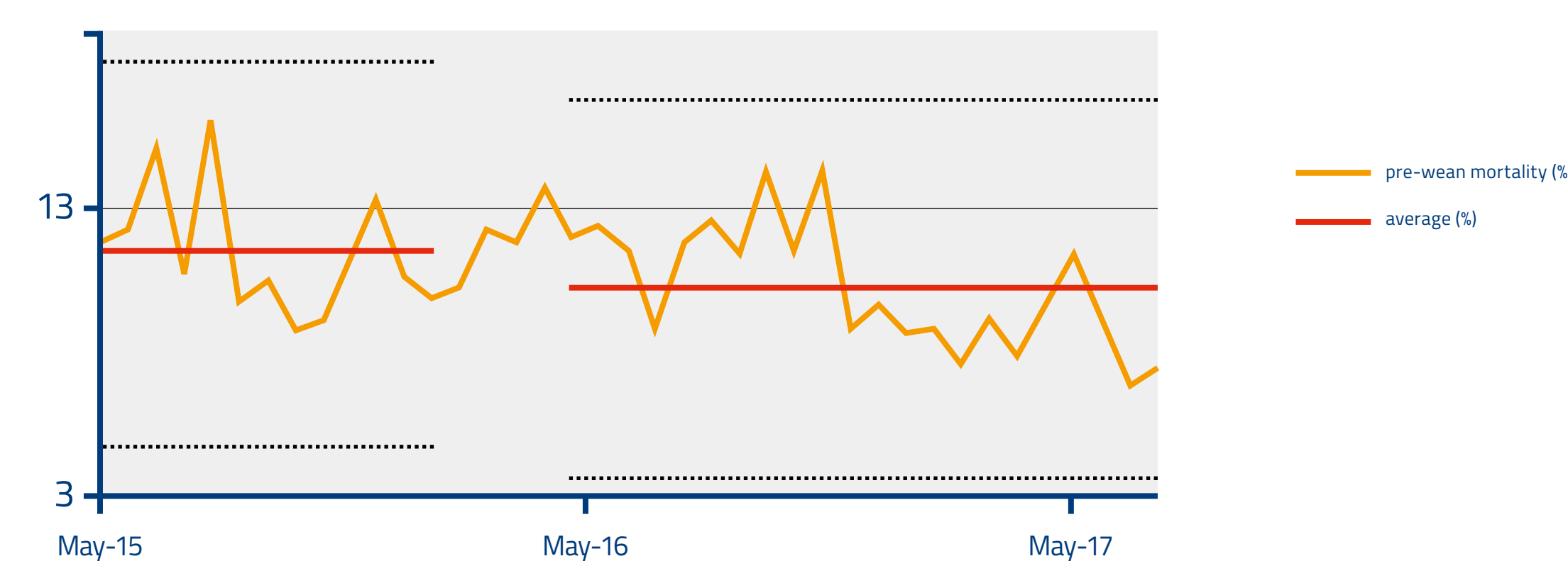


Fig. 4.: pre-wean mortality [%]



CONCLUSIONS AND DISCUSSION

This case report illustrates that an adjustment of biosafety measures and vaccination procedures with application of a novel sow and piglet vaccine can lead to a considerable decrease in numbers of sows returning to estrus.

At the same time the number of piglets weaned per litter remained constant, while the clinical symptoms in the nursery were brought to a halt.

