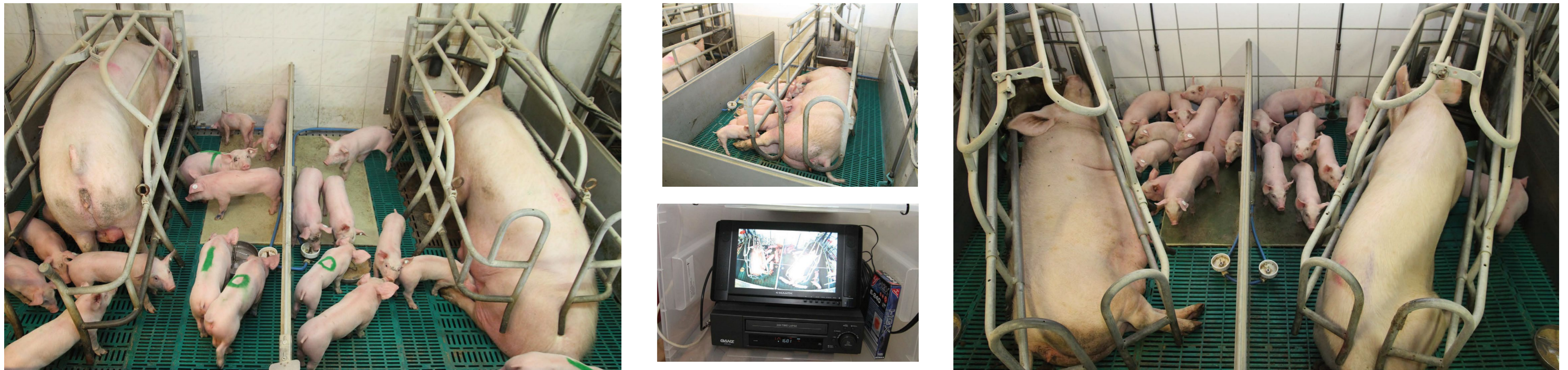


## Background

The aim of this study was to examine the effect of two combined porcine circovirus type 2 (PCV2) and Mycoplasma hyopneumoniae (M. hyo) vaccines on the activity of piglets regarding suckling and resting behaviour.



## Material & Methods

Overall 44 piglets out of 4 litters were divided in two groups and vaccinated with either (A) FLEXcombo® (mixture of Ingelvac CircoFLEX® and Ingelvac MycoFLEX®, water based adjuvant, n=21) or (B) Porcilis® PCV M hyo (mineral oil based adjuvant, n=23). All animals were individually weighed three days before vaccination and at weaning (28 days). Three animals of each litter (one lightweight, one middleweight, one heavy piglet) were marked and chosen as focus animals. Their suckling- and resting behaviour was video monitored in 24 hour intervals the day before vaccination, on day of vaccination and two days afterwards using Mangold Interact Software.

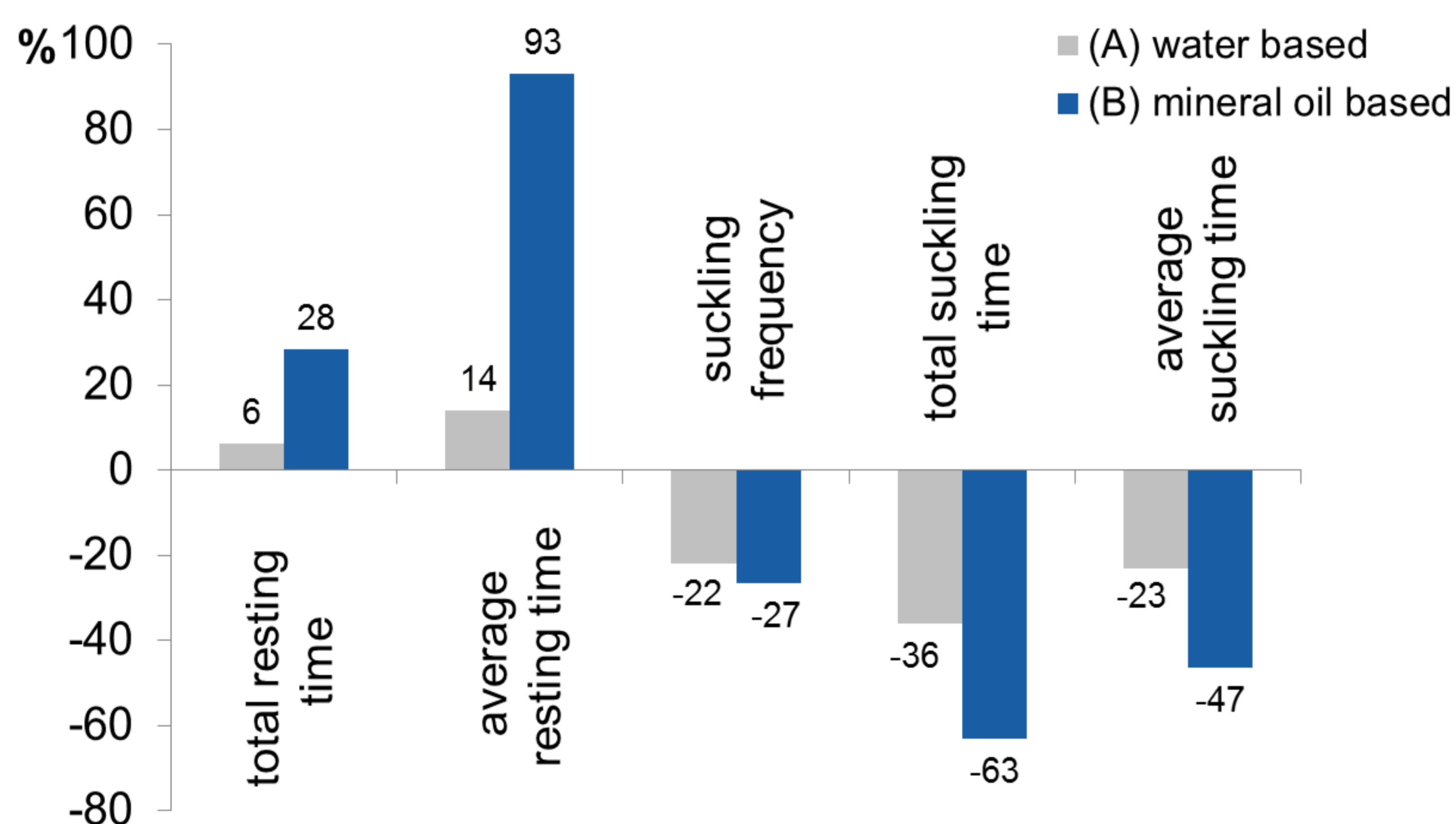


Fig. 1: **Observation of three focus piglets per litter:**– suckling frequency and resting behaviour after vaccination (difference day 1 to day 2 in %)



video: piglets during suckling phase

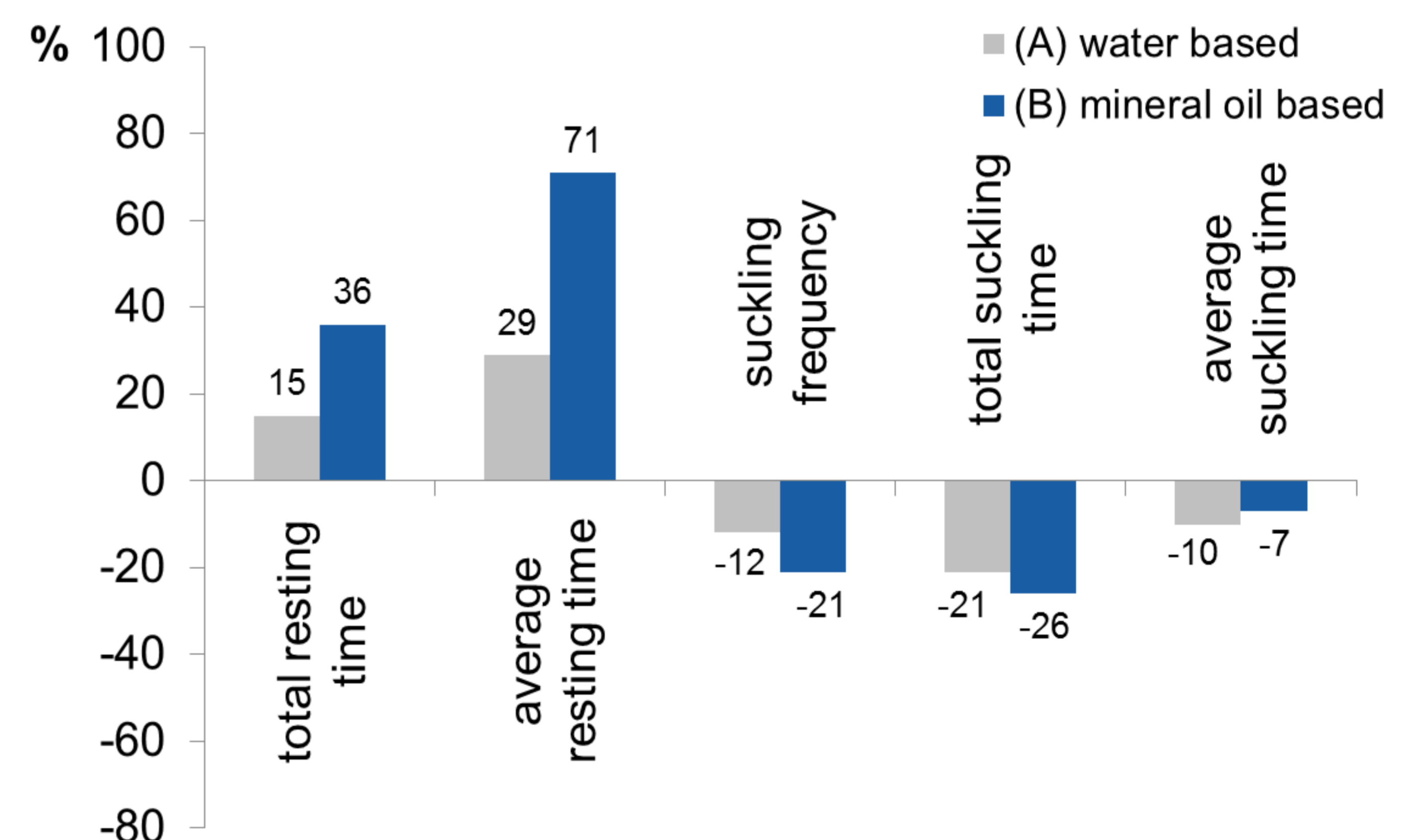


Fig. 2: **Observation of whole litter:** suckling frequency and resting behaviour after vaccination (difference day 1 to day 2 in %) (sow 317/378 and 455/477)



video: piglets during resting phase

## Results focus piglets - test 1

The animals in group A (FLEXcombo®, water based adjuvant) showed only minimal changes in the total resting time. Compared to the day before vaccination, they only showed an increase of 6 % in resting time.

The suckling time was 25% less during the same period.

Piglets from group B (Porcilis® PCV M hyo, mineral oil based adjuvant) showed an increase in resting time of 28%, accompanied with a drop in suckling time of 40%.

## Results whole litter - test 2

The animals in group A (FLEXcombo®, oil based adjuvant) showed only minimal changes in the total resting time. Compared to the day before vaccination, they only showed an increase of 15 % in resting time.

The suckling time was 12 % less during the same period.

Piglets from group B (Porcilis® PCV M hyo, mineral oil based adjuvant) showed an increase in resting time of 36 %, accompanied with a drop in suckling time of 7 %.

**This study indicates that vaccines and their adjuvants can impact the behaviour of piglets. Beside vaccine efficacy, tolerability and impact on suckling behaviour should be considered at vaccine choice.**

## Summary

- The piglets showed a clear reaction to vaccination
- Mineral oil based adjuvants in the vaccine showed considerable stronger reactions than water based adjuvants:
  - total suckling time was reduced
  - average suckling time was strongly decreased
  - total resting time & average resting time were clearly increased