

Vira Shield® Research Brief 1

Impact of Vaccination with an Inactivated or Modified-Live Viral Vaccine on Reproduction¹



Study overview

A study was conducted to determine how vaccination with an inactivated or modified-live viral (MLV) vaccine would impact reproductive parameters in beef cows.

Key study results

- Treatment of cows and heifers with Bovi-Shield® during pre-breeding decreased pregnancy success compared to treatment with Vira Shield®
- Treatment with Bovi-Shield tended to reduce the percentage of cows that calved in the first 21 days of the calving season compared to Vira Shield
 - This decrease in calving percent remained over the entire calving season
 - Delaying when the animal conceives/calves can have implications on the success of a cow/calf operation, including pounds of calf weaned, rebreeding and longevity in the herd

Background information

TRIAL DESIGN

- Total head — 1,304*
- Nine herds
 - Blocked by age and calving date in each herd
- Three treatments
 - Control
 - MLV (Bovi-Shield Gold FP 5 L5 HB)
 - Inactivated (Vira Shield 6 L5 HB)

STATISTICS

- Data were analyzed using the GLIMMIX procedure in SAS — treatment, day postpartum and the treatment by day postpartum interaction were analyzed
- No treatment by year interaction ($P > 0.66$)
 - Herd was included as a random variable to account for unknown differences between herd and years

Study results

Chart 1. Pregnancy success

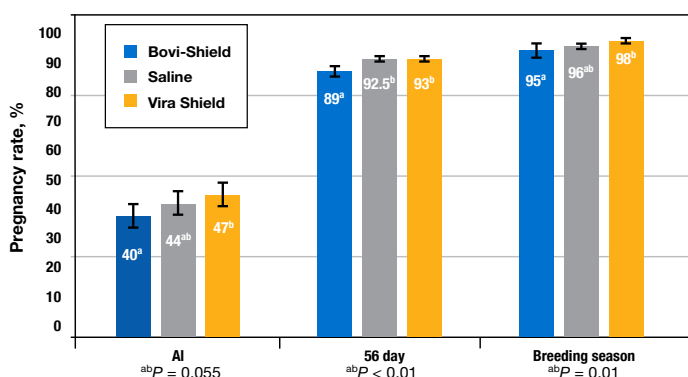


Chart 2. Calving by group

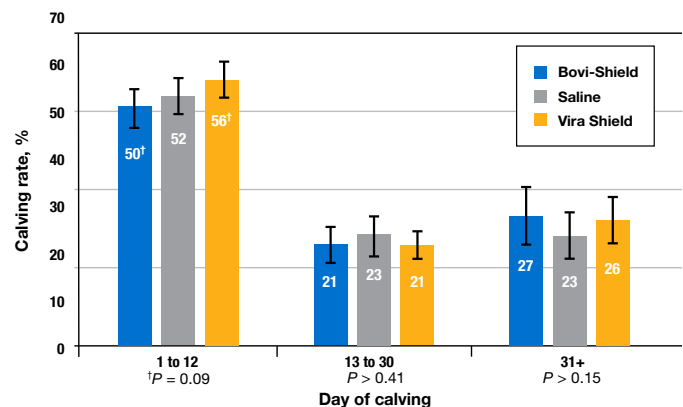
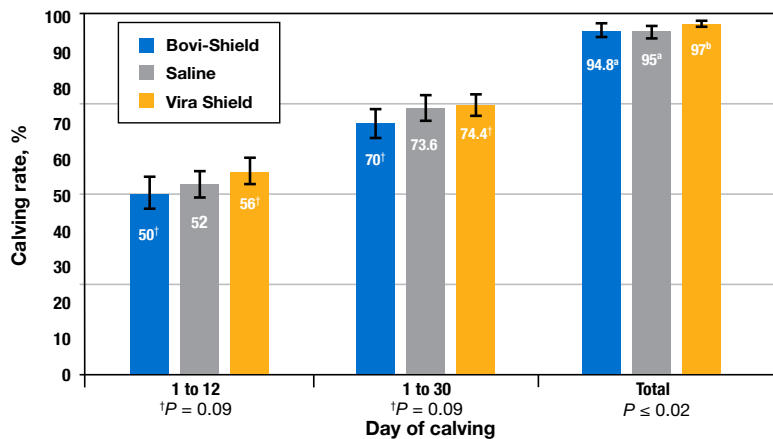


Chart 3. Cumulative calving data



Conclusions

- When evaluating reproductive vaccines, it's critical to consider the impact of decreased calving on the success of the cow/calf herd
- Your vaccine program may have impacts on estrus synchronization (ES) and timed artificial insemination (TAI), which in turn impact the economic efficiency of your operation
 - Potential impacts of ES and TAI include shortened calving season, increased calf uniformity, more calves born earlier in the season, enhanced preweaning growth and heavier calves at weaning²
 - There is a nearly \$50/hd advantage for managing ES and TAI on your operation²
- Ensure that you're getting the most out of your breeding program by maximizing your reproductive vaccine program. To learn more about evaluating your vaccine program and how Vira Shield can help improve reproductive parameters, reach out to your veterinarian or Elanco sales representative

The label contains complete use information, including cautions and warnings. Always read, understand and follow the label and use directions.

*1,436 animals entered the initial study, but 132 were sold prior to calving for non-reproductive purposes.

¹Perry, G., Larimore, E., et al. 2016. "Influence of vaccination with an inactivated or modified-live viral reproductive vaccine on reproductive parameters in beef cows." South Dakota State University.

²Rodgers, J.L., Bird, S.L., et al. 2012. "An economic evaluation of estrous synchronization and timed artificial insemination in suckled beef cows." J Anim Sci. Vol 90(11):4055-62.

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