



Effects of an early weaning system on growth and reproductive characteristics of Nellore heifers during rearing



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INTRODUCTION

Objective: to evaluate the effects of early weaning (150 days vs. 240 days) of Nellore calves during two consecutive generations on the second-generation heifers' body growth and reproductive characteristics.

MATERIAL AND METHODS

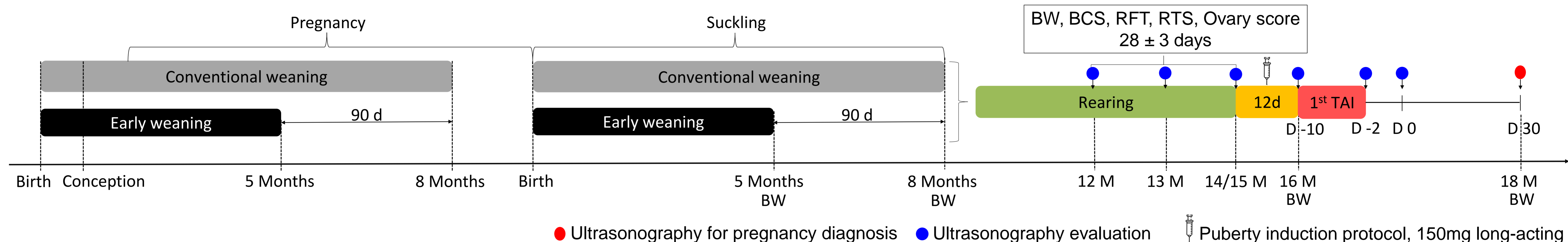


Fig 1. Experimental design, 34 heifers were subjected to the effects of either early weaning (n=16) or conventional weaning (n=18) during their fetal programming (weaning of the previous generation when they were in the uterus) and were also subjected to the same weaning regime in the next year.

RESULTS

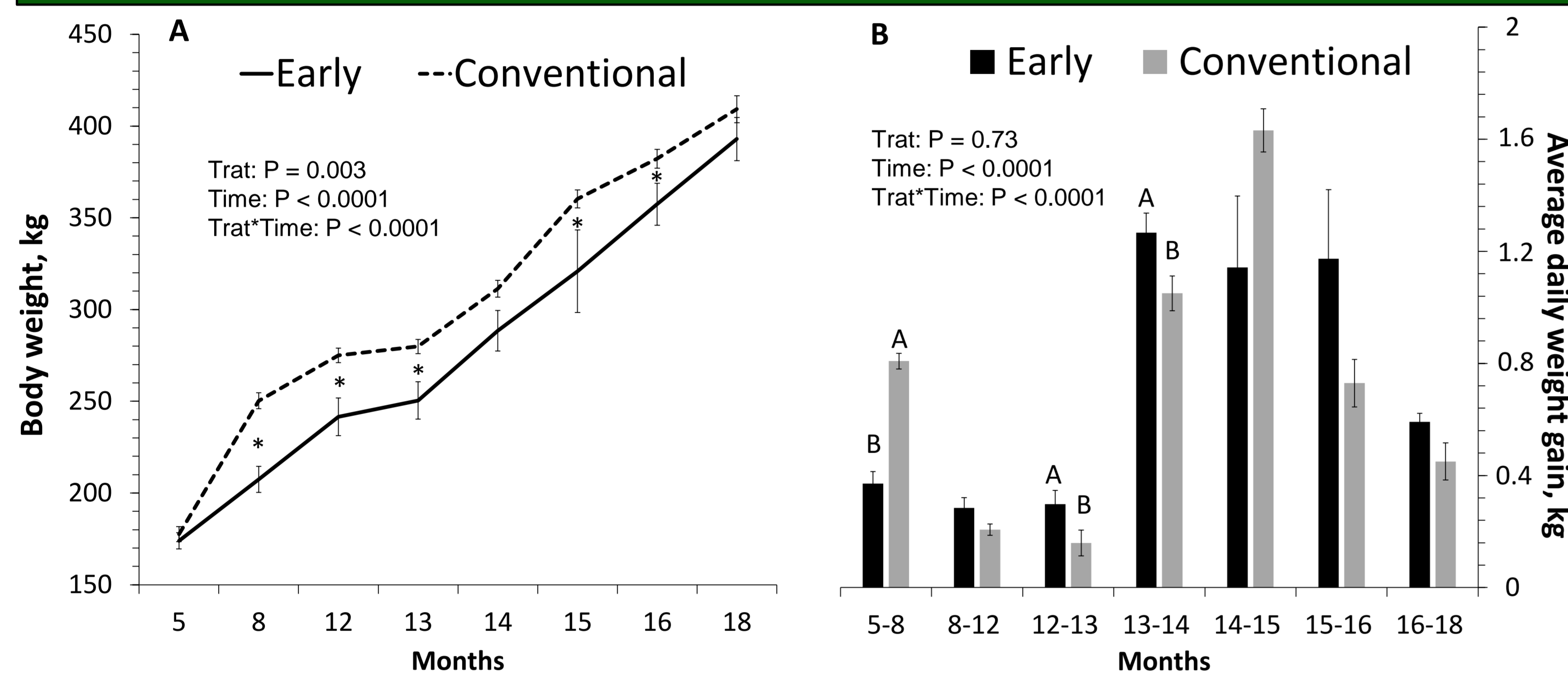


Fig 2. Body weight (Panel A) and average daily weight (Panel B) in early and conventional weaned heifers from 5 to 18 months of age. * Means indicate differences ($P \leq 0.05$) between treatments. ^{AB} Means without a common letter within a group indicate differences ($P \leq 0.05$). Results are expressed as Mean \pm SEM.

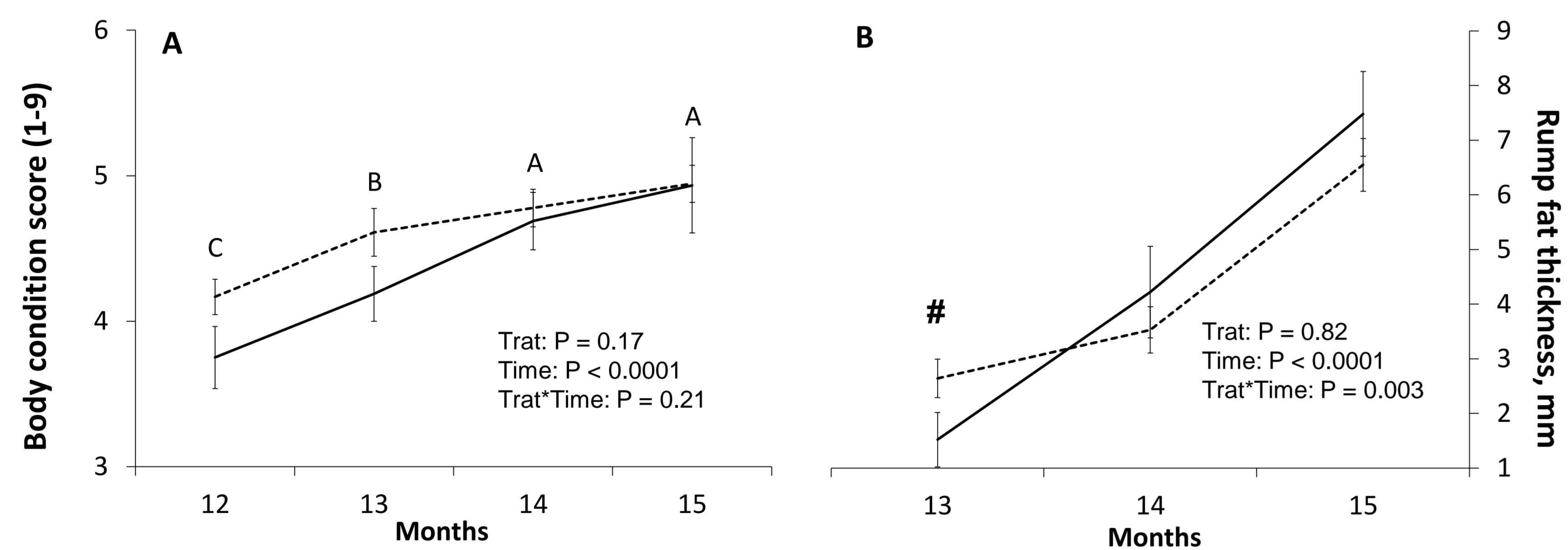


Fig 3. Body condition score (Panel A) and rump fat thickness (Panel B) in early and conventional weaned heifers from 12 to 15 months of age. ^{AB} Means without a common letter within a group indicate differences ($P \leq 0.05$). # Means indicate differences ($P > 0.05$ and $P \leq 0.1$) between treatments. Results are expressed as Mean \pm SEM.

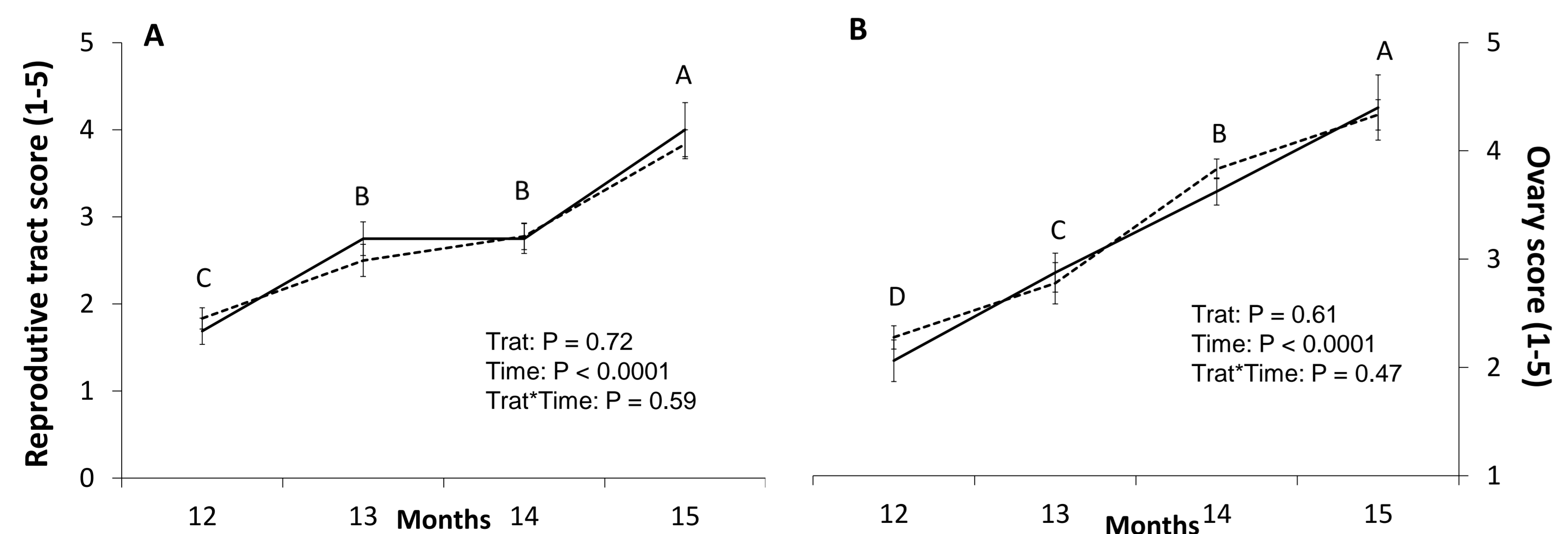


Fig 4. Reproductive tract score (Panel A) and ovary score (Panel B) in early and conventional weaned heifers from 12 to 15 months of age. ^{AB} Means without a common letter within a group indicate differences ($P \leq 0.05$). Results are expressed as Mean \pm SEM.

CONCLUSION

Precocious heifers born in the early weaning system can overcome the reduced BW gain from 5 to 8 months of age due to lack of suckling compared to heifers in the conventional weaning system, and present comparable body and reproductive development and performance in their first breeding season.

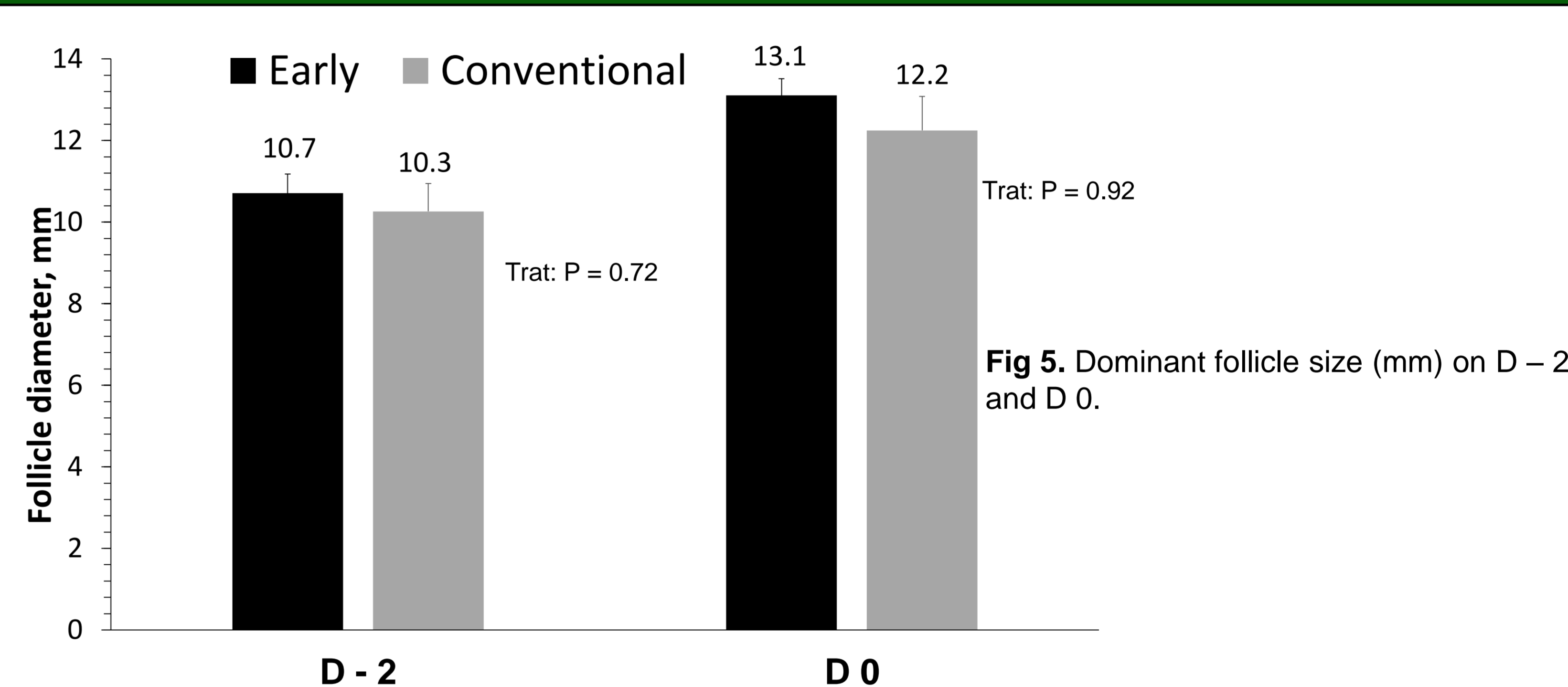


Fig 5. Dominant follicle size (mm) on D - 2 and D 0.

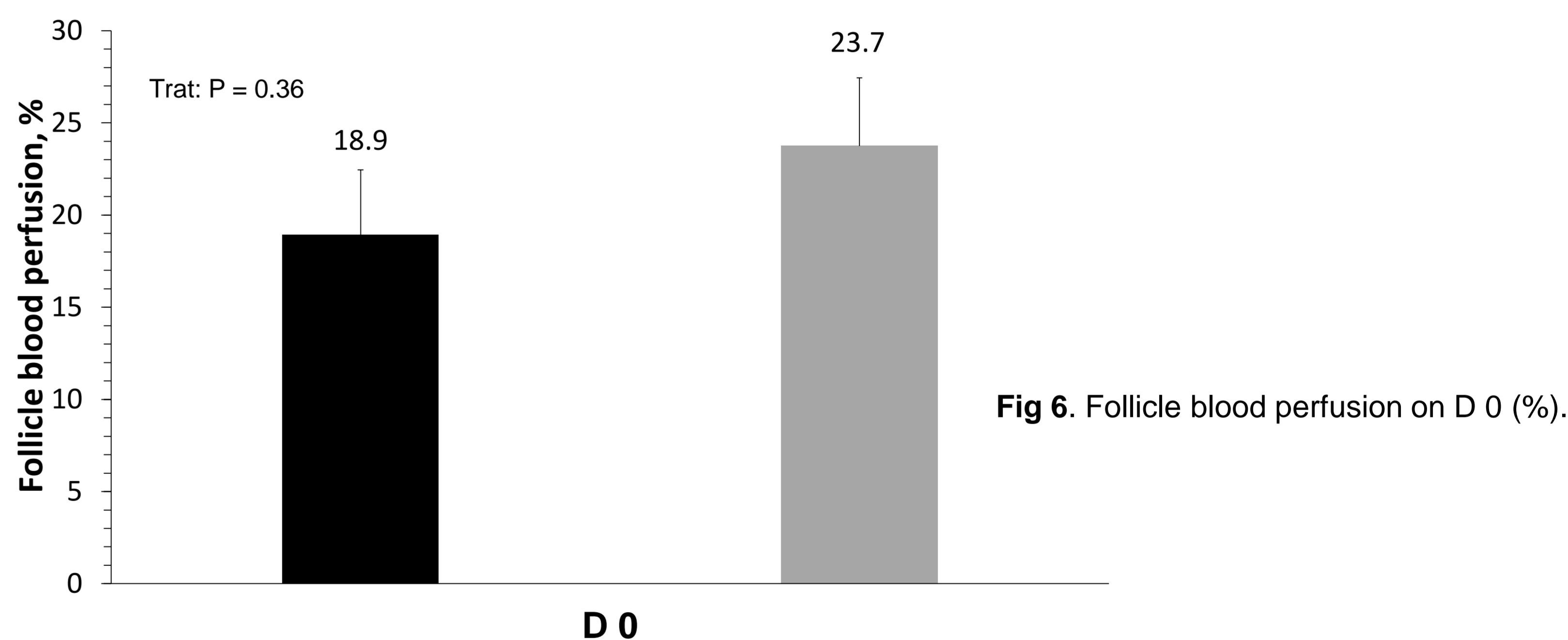


Fig 6. Follicle blood perfusion on D 0 (%).

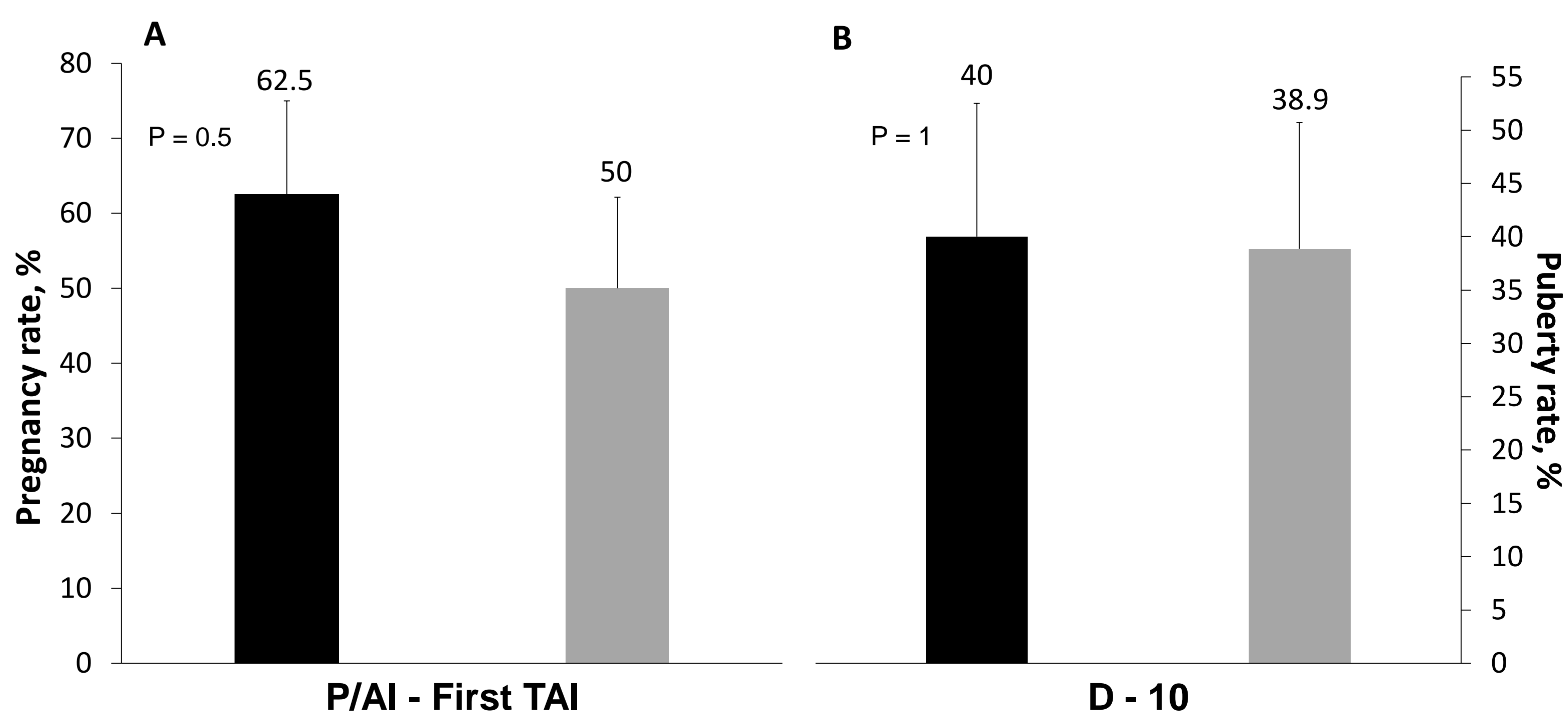


Fig 8. Proportion (%) of pregnant heifers after first TAI (Panel A) and proportion (%) of puberty heifers on D-10 (Panel B).

ACKNOWLEDGMENTS

