ABST. *#PSVIII-35* – Administration of an appeasing substance at castration improves performance of pre-conditioned beef crossbred steers

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Introduction

- Castration is commonly used to reduce sexual and aggressive behavior, as well as to improve meat quality. Nonetheless, castration leads to a neuroendocrine stress response that may reduce performance and health of the herd during the post-castration period. Hence, strategies that improve performance of beef animals following castration are warranted.
- The bovine appeasing substance (**BAS**) has been shown to alleviate stress responses after weaning and to improve performance of newly-weaned beef animals.

Objective

- The objective of this study was to evaluate the effects of administering an appeasing substance immediately before castration on performance of beef crossbred steers during a 30-day preconditioning period.

Materials and Methods

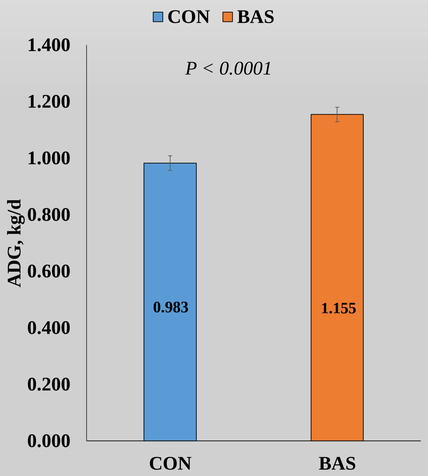
- On day 0 of the study, 390 crossbred Angus × Nellore animals were ranked by initial shrunk BW (255 ± 21.1 kg) and assigned to receive or not (**CON**) 5 mL/head of BAS (SecureCattle; Nutricorp, Araras, SP, Brazil) immediately before castration.
- From day 0 to 30, animals within treatments were maintained in 2 feedlot pens (300 m apart) and received a grass hay-based diet ad libitum.
- On day 30, animals were weighed following 16 hours of feed and water withdrawal.

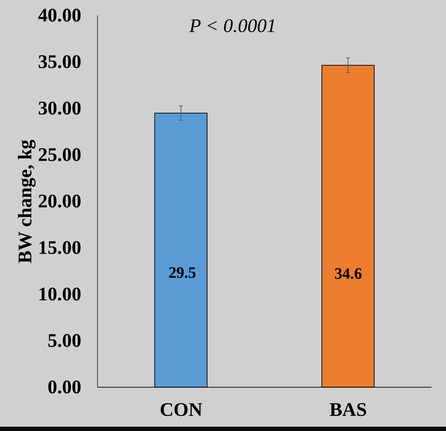
Statistical analysis

- Data were analyzed using PROC MIXED of SAS.
- Animal was used as the experimental unit.
- Pen dry matter intake (**DMI**) and feed efficiency (**FE**) were analyzed descriptively.
- Significance was set at $P \leq 0.05$. Tendencies were denoted if $0.05 < P \leq 0.10$.

Results

- Average daily gain (**ADG**) was greater for BAS- vs. CON-administered cohorts ($P < 0.0001$).
- Likewise, BW change was greater for animals receiving BAS at castration ($P < 0.0001$).
- From day 0 to 30, DMI was numerically similar among treatment groups (6.70 vs. 6.75 kg/d for CON and BAS, respectively), likely indicating that FE is greatly benefited by BAS (146 vs. 172 g/kg for CON and BAS, respectively).





Conclusion

- The administration of BAS at castration improves ADG and BW change of pre-conditioning crossbred beef steers.
- The improvements might be the result of a greater FE and, consequently, greater nutrient utilization for growth vs. deviation to deal with a stressful situation.
- BAS is a promising technology to improve performance and health of beef animals.