MALE EFECT IN CHURRA GALEGA BRAGANÇANA AND SULFFOLK EWES UNDER A LONG-DAY ARTIFICIAL PHOTOPERIOD

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Objective

- The aim of this study was to evaluate male effect in Churra Galega Bragançana and Suffolk ewes under an artificial long-day photoperiod (16L:8D).

Material and Methods

- This study took place at the University of Vila Real (Portugal) (41° 49' N).
- 36 Churra Galega Bragançana (CGB) and 36 Suffolk ewes.
- 2-5 years old.
- Fed in group with hays of natural meadows plus an average of 300-500 g/day/animal of concentrated commercial food.
- Allocated in light control facilities, under a constant artificial 16L:8D photoperiod (light intensity of 300 lux).

Material and Methods

- Body weight was determined weekly.
- **Physiological state Assessment**
- Blood samples were collected twice a week two months later.
- Progesterone plasmatic concentrations were evaluated by RIA (P4 ≥ 0.5 ng/ml).
- **Treatments**
- Ovarian activity was controlled by vaginal sponges (30 mg of FGA) for 14 days.
- Male effect was induced by vasectomised rams.

Material and Methods

- Rams were aproned for heat behaviour.
- Ovarian activity was determined by endoscopy 3, 10, and 21 days after treatments.
- CL lifespan was classified in short (3-7 days), normal (8-15 days) or long (≥ 16 days).
- **Statistical methods**
- Chi-square tests were performed to compare proportions.
- Student´s t-tests were performed to compare ovulation rates.

Results and Discussion

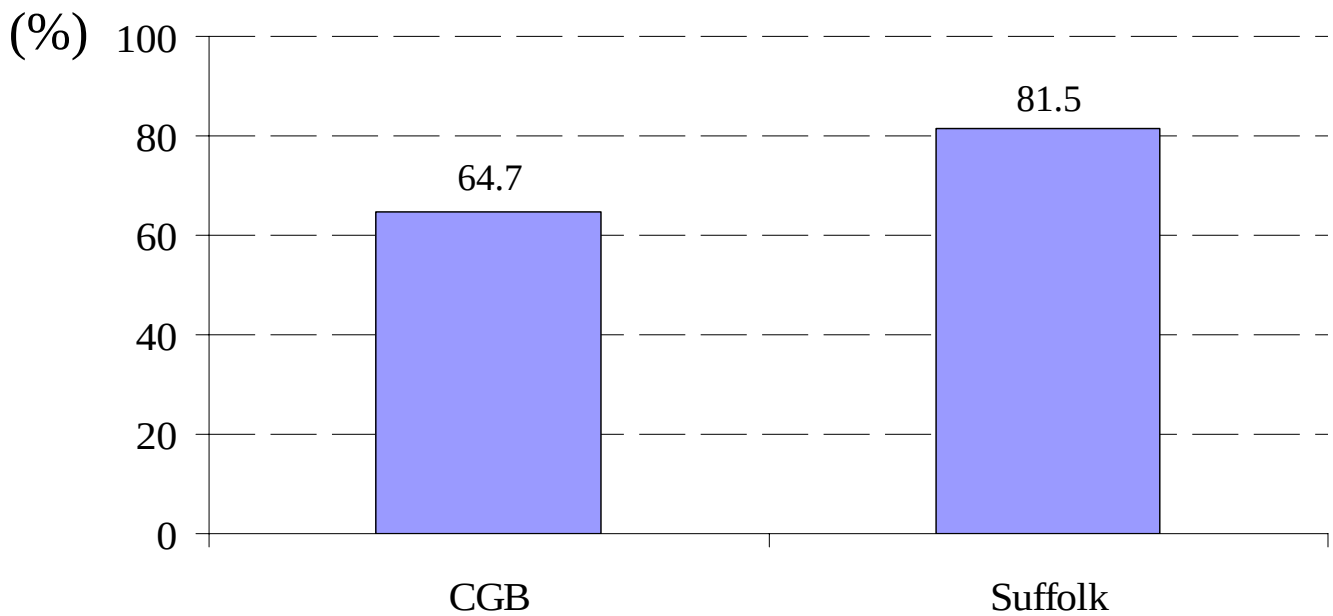

FIGURE 1 – Proportions of anoestrous CGB and Suffolk ewes after two months under a constant 16L:8D photoperiod.

- Male effect disrupted seasonal anoestrous in a higher proportion of CGB than Suffolk ewes.

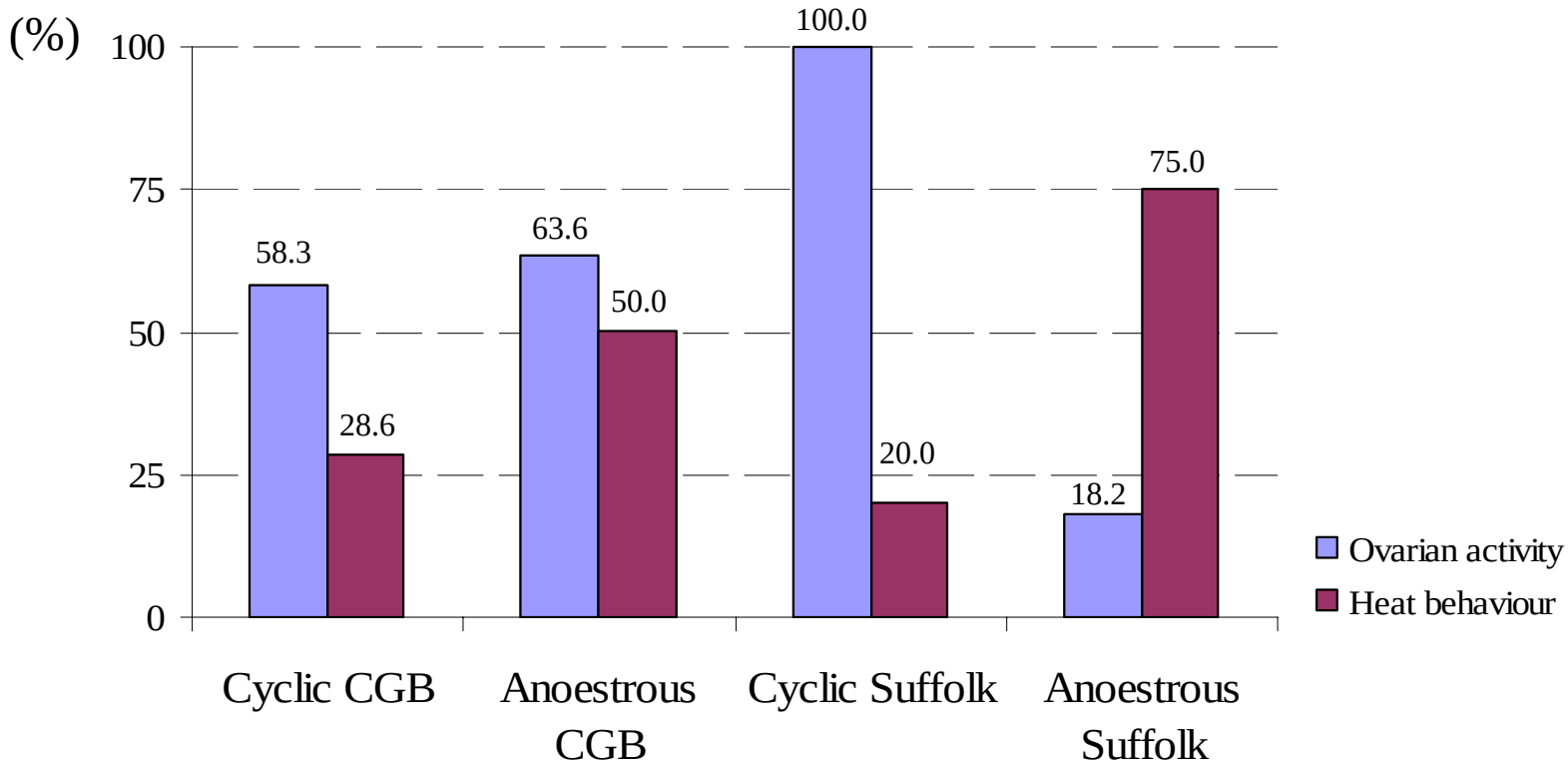

FIGURE 2 – CGB and Suffolk ewes response to male effect according to their physiological status at treatment application.

- Male effect was not influence by age or body weight in both CGB and Suffolk ewes.

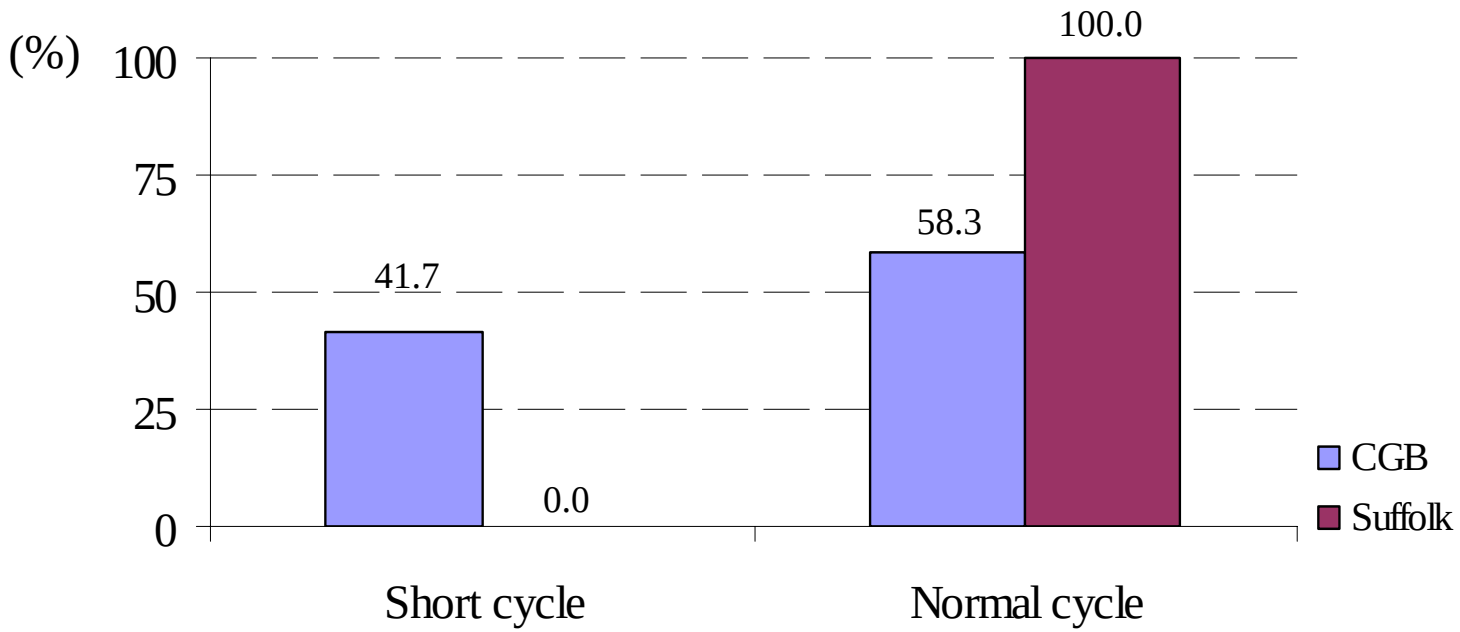

FIGURE 3 – Proportions of CGB and Suffolk ewes that presented a short or normal lifespan first CL.

- Male effect determined a second ovulation in all CGB and Suffolk responding ewes.

Results and Discussion

- Ovulation rate was highly variable between animals.
- Breed had no effect in mean ovulation rate (1 oocyte/ewe).
- The same mean ovulation rate was registered in the first and second ovulation post-treatment.
- Second ovulation rate was not affected by previous ovarian activity.

Conclusions

- 64.7% of CGB and 81.5% of Suffolk ewes were in seasonal anoestrous after two months under a constant 16L:8D photoperiod.
- Male effect induced ovarian activity in a higher proportion of CGB than Suffolk ewes.
- Mean ovulation rate was not influenced by breed (1 oocyte/ewe), although high differences were registered between animals.