



Sub-fertility in beef cattle: follicle dynamics and progesterone concentrations during the estrus cycle

Alvez, A¹, Guillen, S¹, Sequeira, M^{1,2}, Meikle A², Viñoles C¹

¹Instituto Nacional de Investigación Agropecuaria, Tacuarembó, Uruguay

²Laboratorio de Técnicas Nucleares, Facultad de Veterinaria, Montevideo, Uruguay

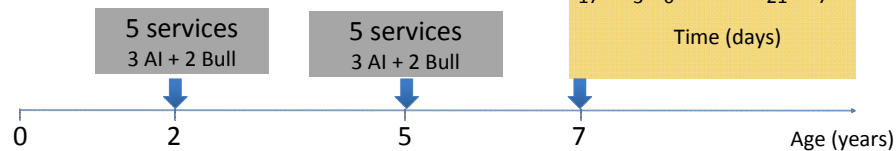
Aim

To study the follicular dynamics and progesterone profiles in fertile and sub-fertile Hereford cows of similar age and body development

Experimental design

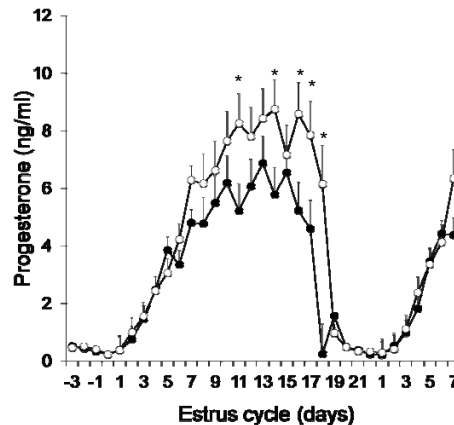
Fertile (n=5) → Pregnant 1st AI + Pregnant ≥ 3 times

Sub-fertile (n=6) → Pregnant Bull/dry + Pregnant ≤ 2 times



Results

- Fertile and sub-fertile cows had similar age, body weight and hip height
- All the fat measurements (marbling, subcutaneous fat and P8) were similar between groups
- Fertile cows had a greater rib eye area ($76.7 \pm 3.1 \text{ cm}^2$) than sub-fertile cows ($66.9 \pm 2.9 \text{ cm}^2$; $P < 0.05$)
- No differences were observed in the number of waves and follicle dynamics during the estrus cycle



Progesterone concentrations during the estrus cycle in fertile cows (black symbol) and sub-fertile cows (white symbol) *= $P < 0.05$

Conclusions

A greater rib eye area was observed in fertile than sub-fertile cows of similar age and body development. Fertile cows had lower progesterone concentrations from Day 8 to 18 of the cycle compared to sub-fertile cows, but this difference had no impact on follicle growth and development

Instituto Nacional de Investigación Agropecuaria

