

Effects of Follicular Ablation on Follicular Growth and Codominance in Beef Cattle

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Background

1. Follicular selection results in one or two dominant follicles that reach a size of >9 mm of diameter.
2. Selection of two dominant follicles with ovulatory capacity from a follicular wave is called co-dominance.
3. The mechanisms by which two follicles reach dominance and acquire ovulatory capacity remains unclear.

Aims

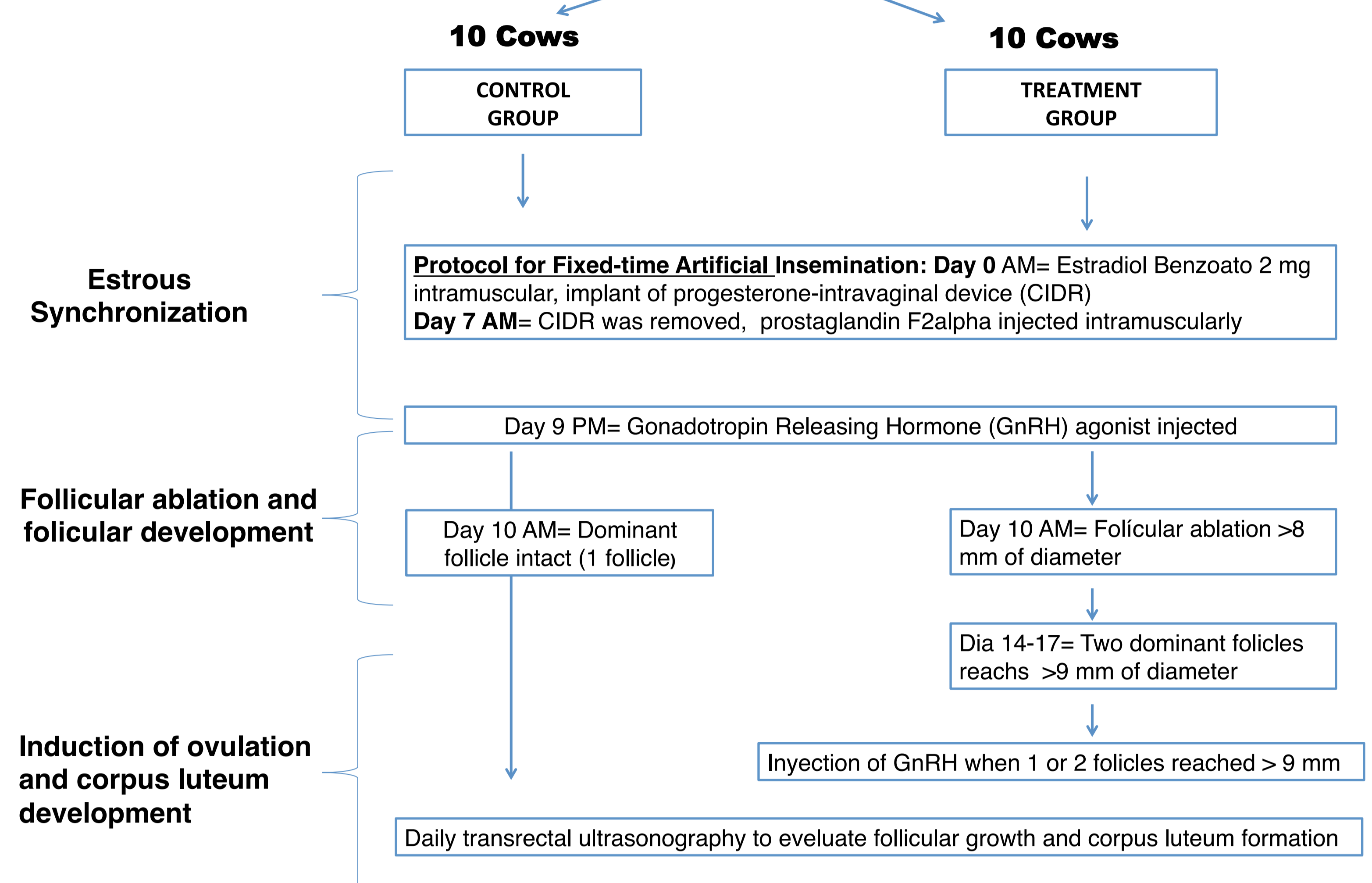
This study aimed to clarify the mechanisms by which two follicles reach dominance and acquire ovulatory capacity



Materials and Methods

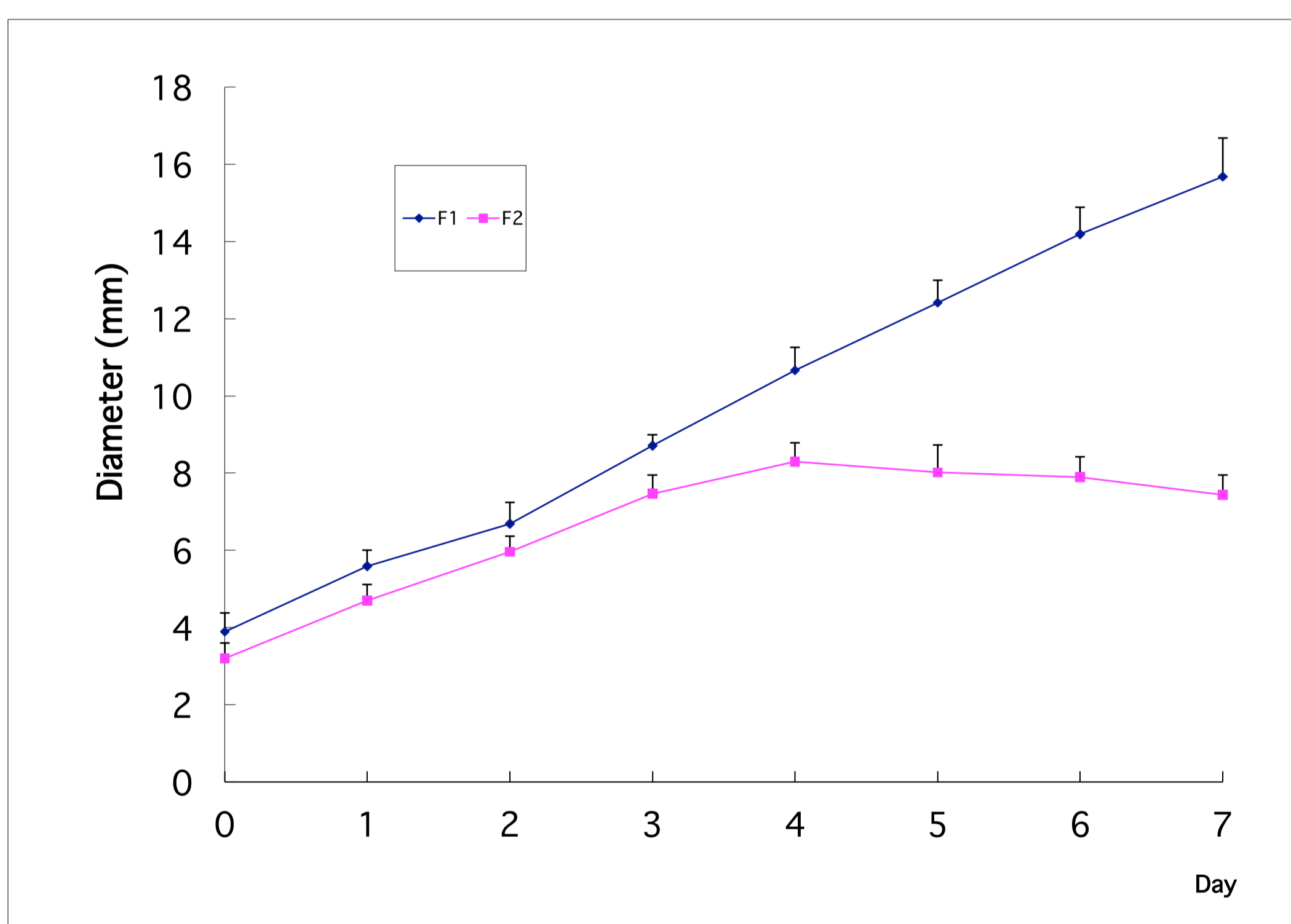
1) Animals

Beef cows: Body weight (> 400 Kg), age (2nd to 4th parturition), Body condition score ≥ 3 (1 to 5 scale) nonpregnant cows, free of any reproductive diseases, identified by tags number



Results

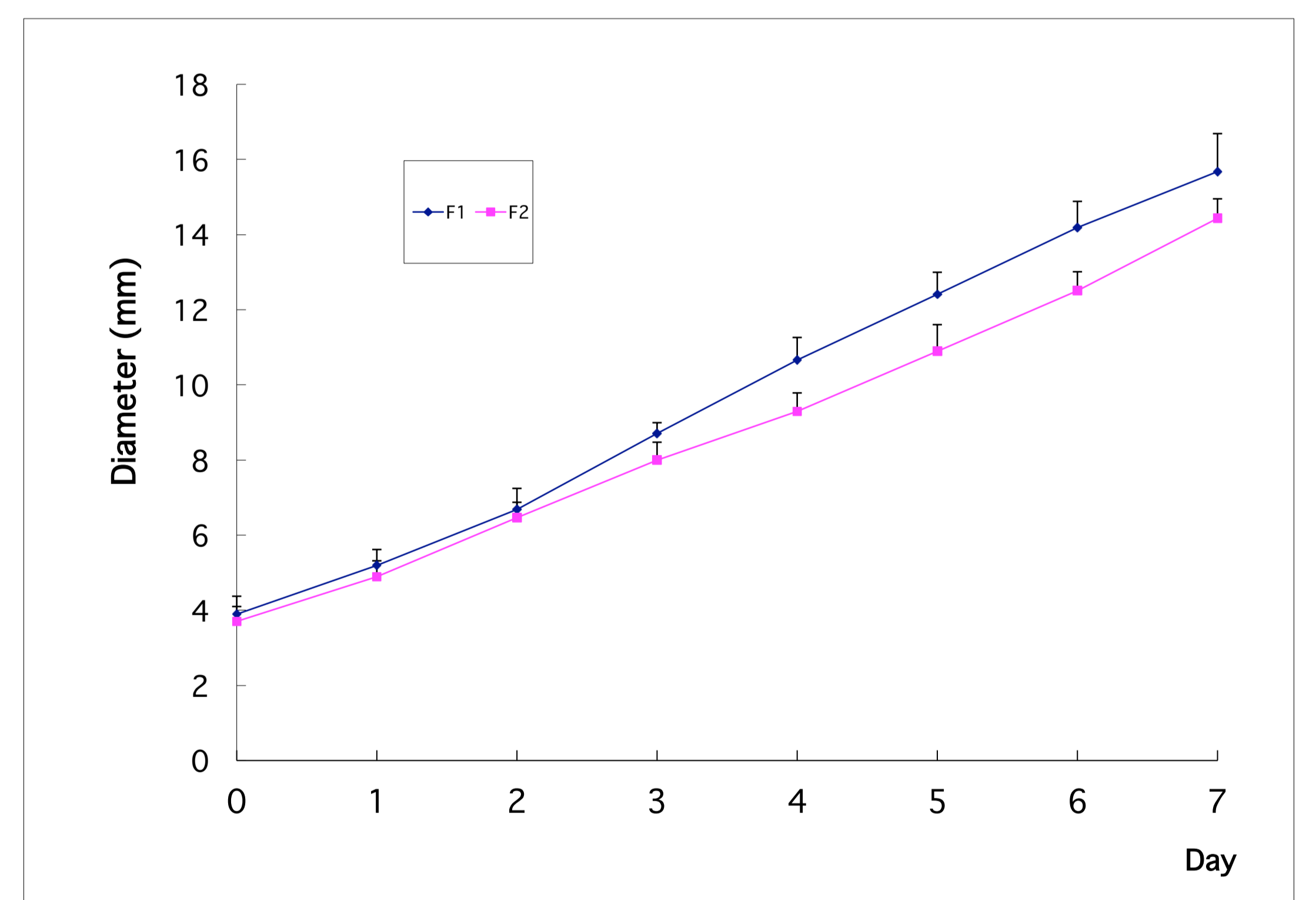
Figure 1: Follicular growth in Control group



Follicular deviation occurs between 7 and 8 mm



Figure 2: Follicular growth in ablated Group



Five cows from the ablated group developed co-dominance and double ovulation, as confirmed by the presence of two corpora lutea. However, co-dominance and double ovulation was not observed in the control group.

Conclusion

The overall results suggest that aspiration of pre-ovulatory follicle results in an increase in co-dominance and double ovulation in beef cattle.

References:

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- 2) Hayashi KG, Matsui M, Acosta TJ, Kida K, Miyamoto A: Effect of the dominant follicle aspiration before or after luteinizing hormone surge on the corpus luteum formation in the cow. J. Reprod. Dev. 52, 129-135 (2006)

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