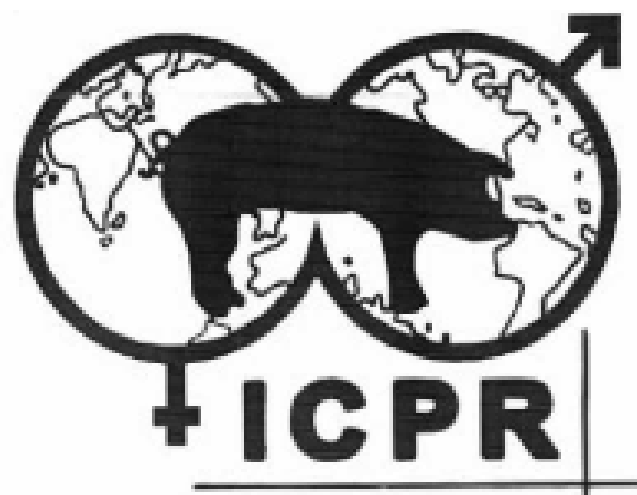


P19: Carry-over effect of feeding levels in late gestation on subsequent milk yield in sows



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Takele Feyera^{1*}, Uffe P. Krogh², Thomas S. Bruun², and Peter K. Theil^{1†}

¹Aarhus University, Department of Animal and Veterinary Sciences, Blichers Allé 20, P.O. Box 50, Tjele DK-8830, Denmark;

²SEGES Innovation, DK-8200 Aarhus N, Denmark, [†]Deceased, December 2022

*email: takele.feyera@anivet.au.dk



BACKGROUND

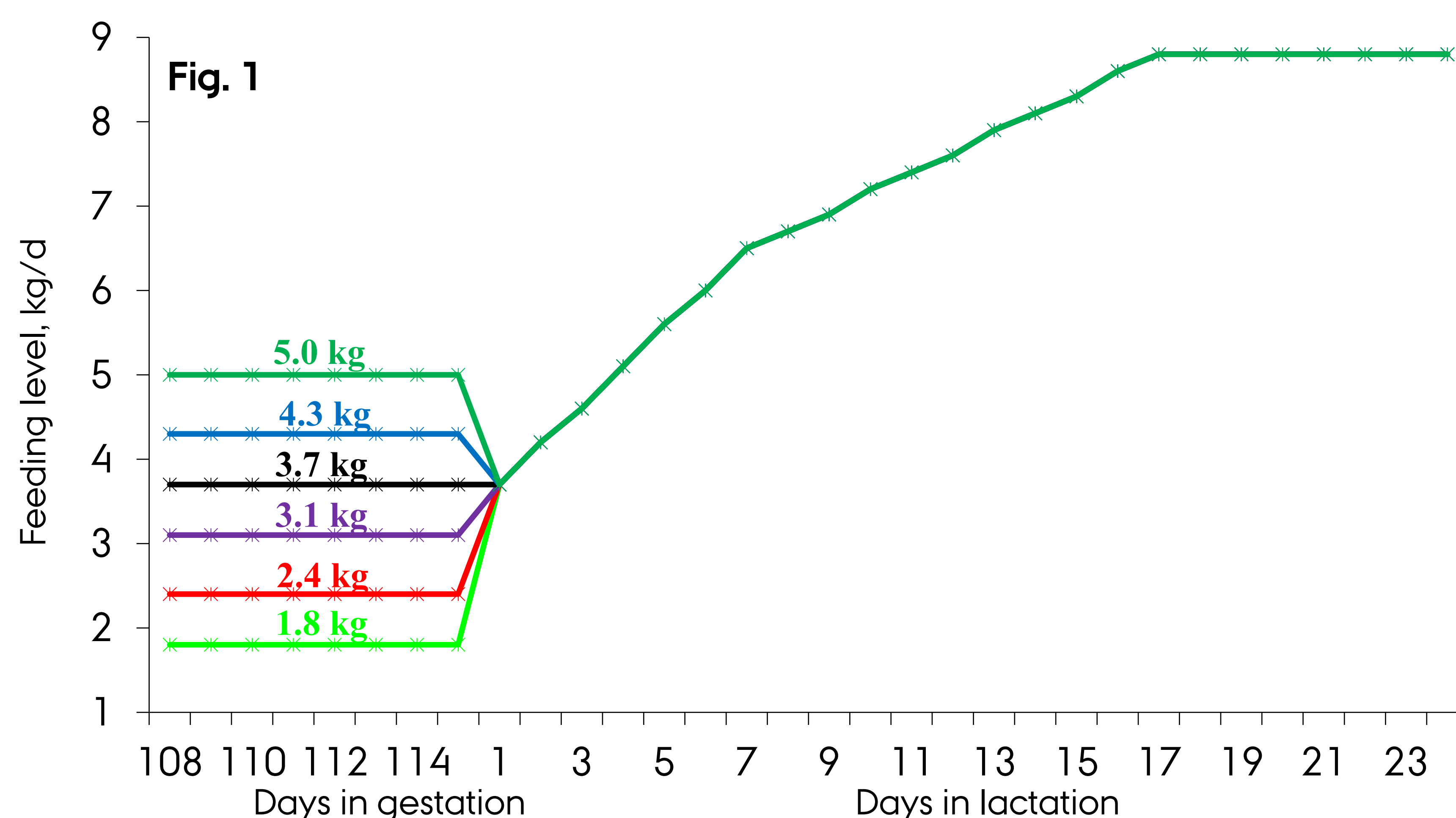
Mammary gland growth and development in sows undergoes a significant acceleration during transition period. The feeding levels provided to the sows during this critical period may affect this characteristic, ultimately influencing performance of sows during the subsequent lactation.

OBJECTIVE

This study investigated the carry-over effect of feeding levels during late gestation on the subsequent lactation performance of both sows and their litters.

METHODOLOGY

Forty-eight sows were assigned to 1 of 6 feeding levels starting from day 108 of gestation until farrowing, while maintaining similar feeding levels during lactation (**Fig. 1**). Essential indicators of lactation performance were measured during the 24-days of lactation.

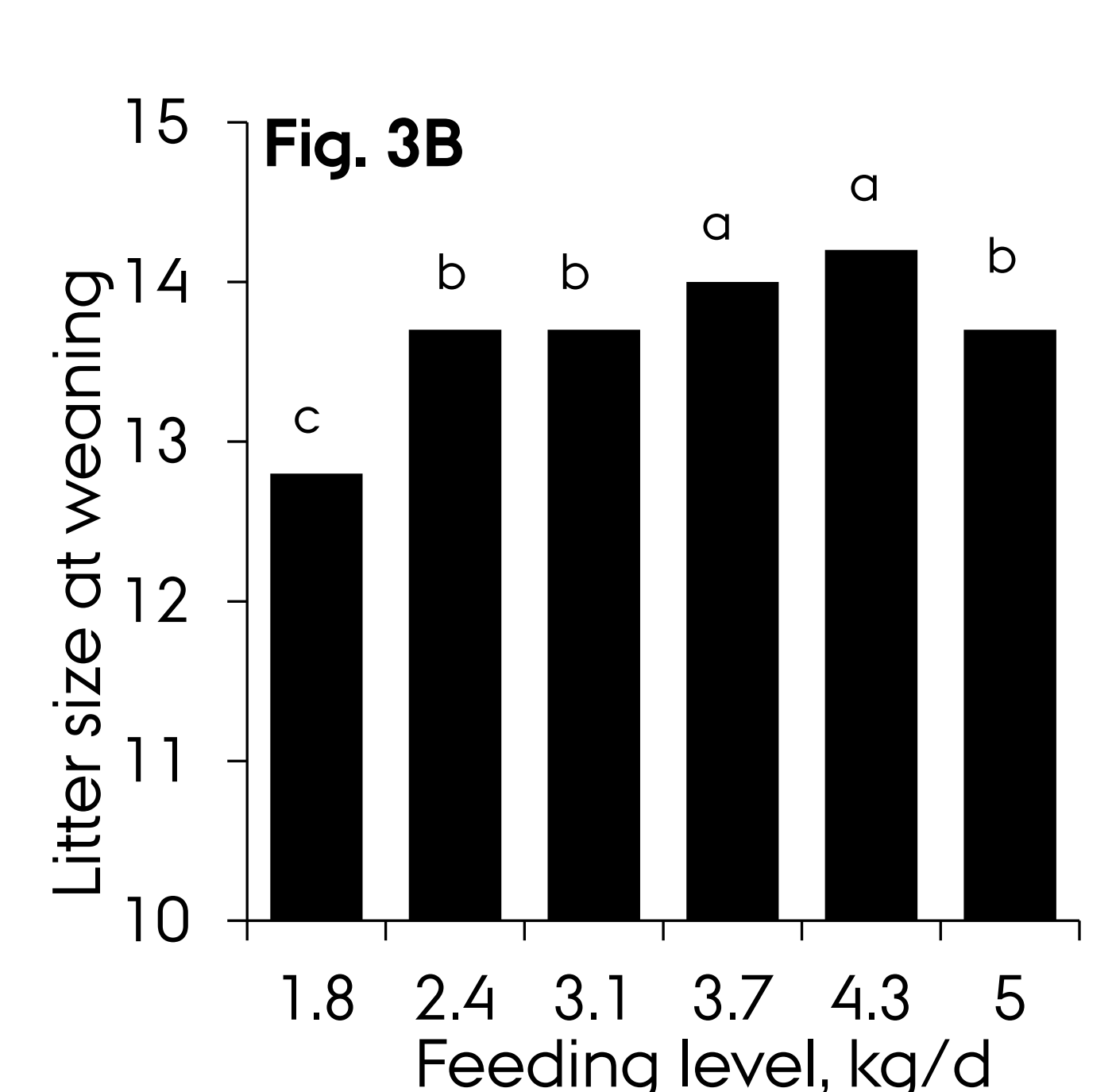
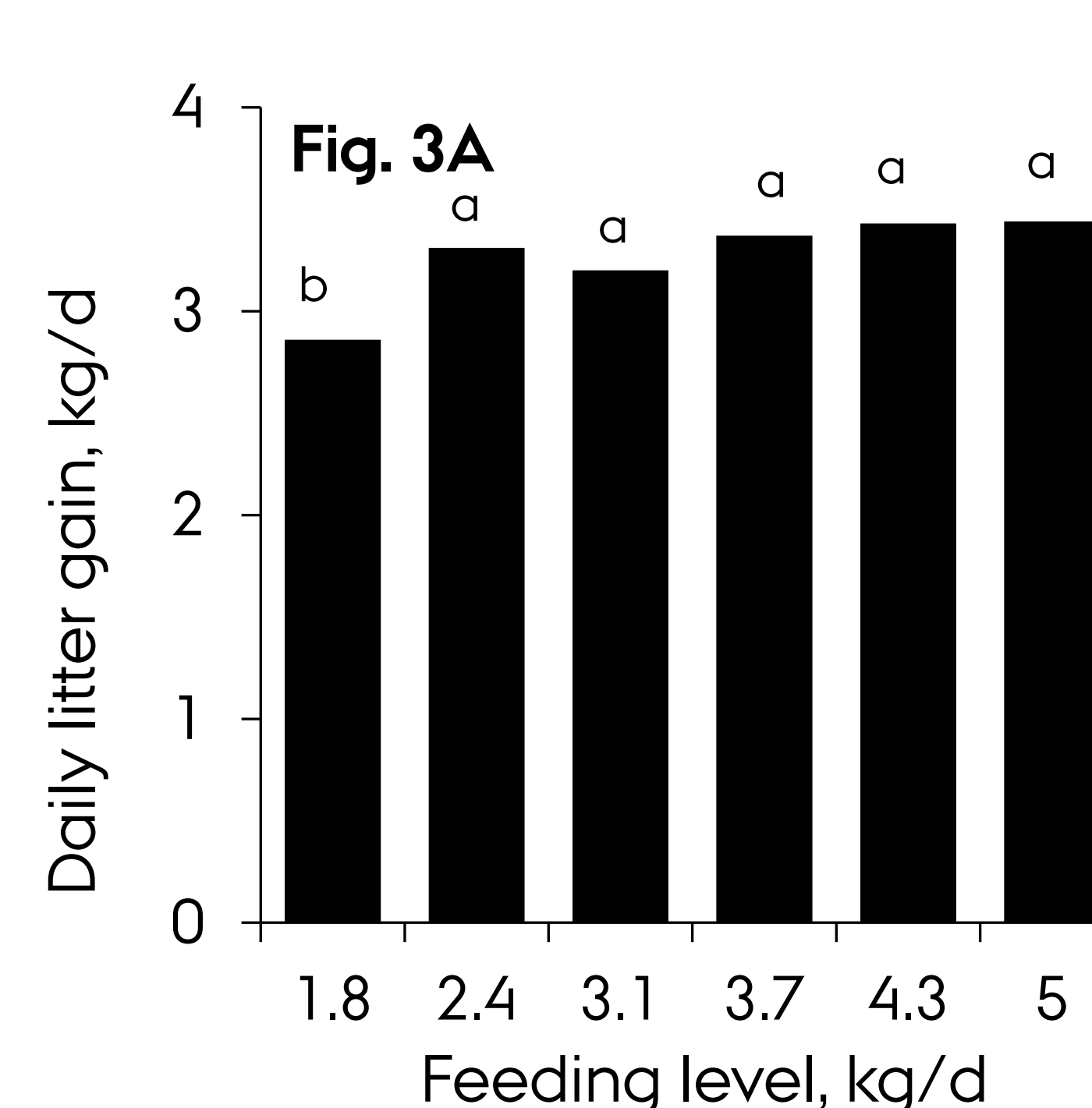
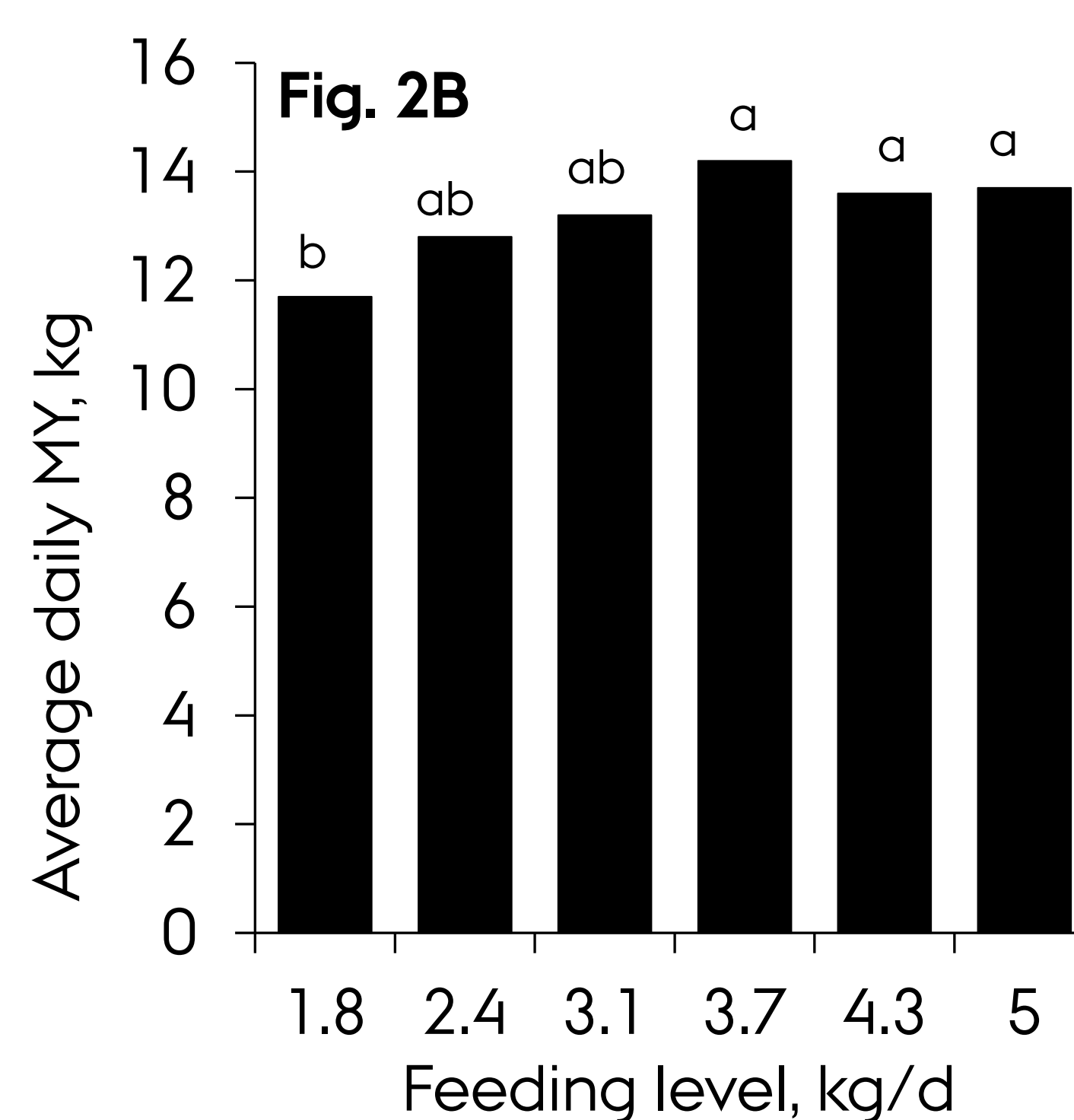
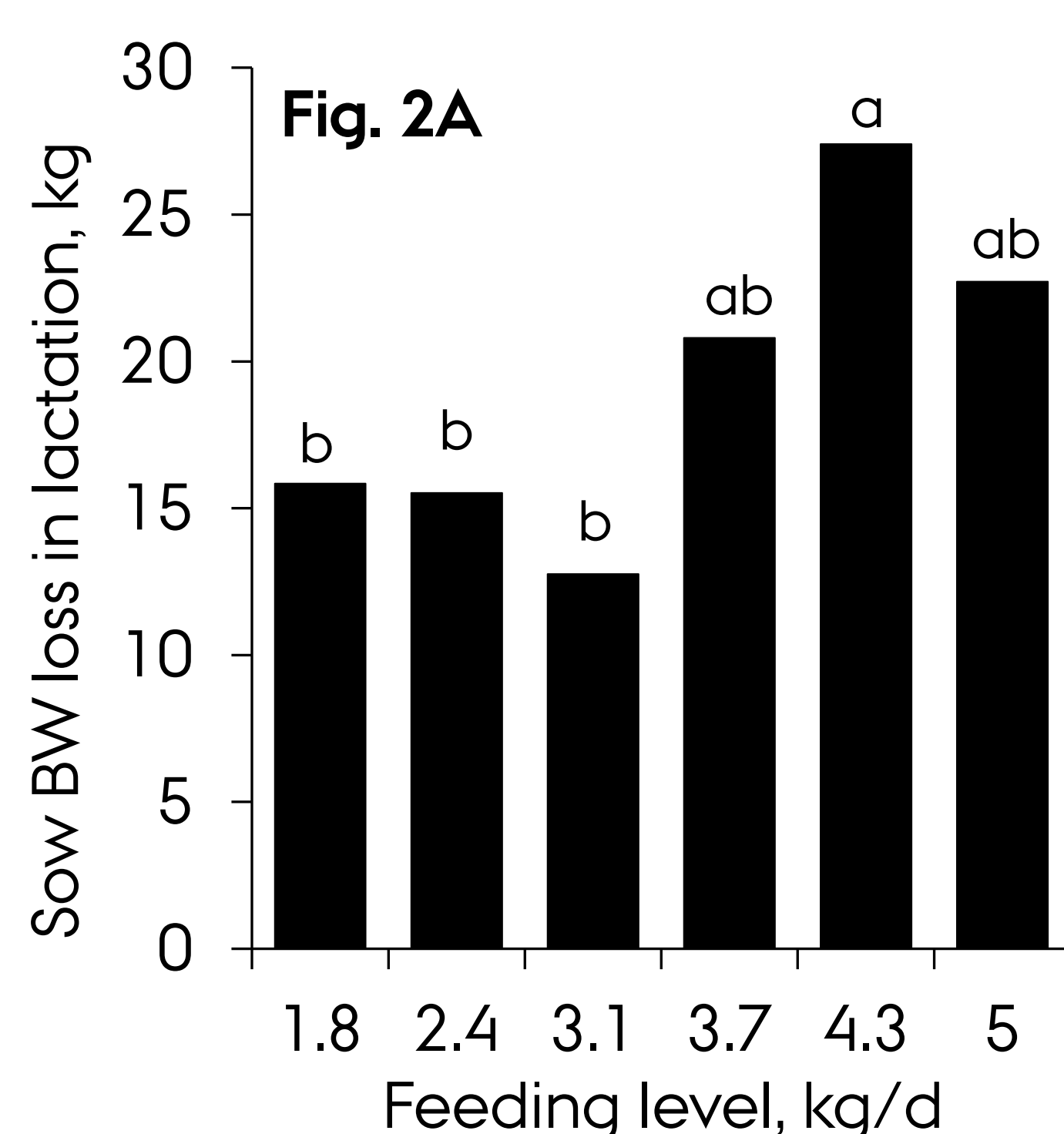


Key response parameters in lactation:

- ❖ Average daily feed intake of the sows
- ❖ Average body weight loss of the sows
- ❖ Average lactation milk yield of the sows
- ❖ Average daily gain of the litter
- ❖ Average litter size at weaning

RESULTS AND DISCUSSION

- ✓ Feeding levels during the last week of gestation did not affect feed intake of the sows in the subsequent lactation ($P = 0.90$).
- ✓ Irrespective of feeding levels during late gestation, lactation weight loss differed among the feeding levels ($P = 0.03$; **Fig. 2A**).
- ✓ Daily litter gain increased linearly with increasing feeding levels during the last week of gestation ($P = 0.005$; **Fig. 3A**).
- ✓ Daily litter gain during the entire lactation was consistently lower in sows fed 1.8 kg/d during the last week of gestation compared to the remaining group ($P = 0.04$).



- ✓ Milk yield increased linearly with increasing feeding levels in the last week of gestation ($P = 0.005$; **Fig. 2B**).
- ✓ A feeding level of 4.2 kg/d during the last week of gestation was estimated to maximize milk yield in the subsequent lactation.
- ✓ Litter size at weaning demonstrated a quadratic increase with increasing feeding levels in gestation ($P < 0.001$; **Fig. 3B**).
- ✓ A feeding level of 4.0 kg/d during the last week of gestation was estimated to maximize litter size in the subsequent lactation.

CONCLUSION

- ✓ Insufficient feeding levels in late gestation negatively affected subsequent milk yield and litter growth performance without affecting mean lactation feed intake of the sows.