

## **Effect of physical activity on cardiac autonomic function of dairy cows on commercial dairy farms**

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**SUPPLEMENTARY FILE**

**Supplementary Table S1.** Characteristics of the investigated smaller- (Farm No. 1 and 2) and larger-scale (Farm No. 3, 4 and 5) farms

Farm No.	1	2	3	4	5	
Herd size	75	80	1150	1900	1200	
Housing conditions	Pasture, fold	Old freestall barn, for 100 cows	4 modern freestall barns, for 250 cows each	2 modern freestall barns, for 1000 cows each	4 modern freestall barns, for 350 cows each	
Bedding	Fold bedded with straw	Rubber mattress	Straw	Sand	Straw	
Group size	No grouping	35–40	110–140	230–255	130–150	
Average space allowance (m <sup>2</sup> /cow)	For the whole barn area, including feeding place	55.0	14.6	8.7	6.5	8.2
	For bedded lying area	27.6	6.2	5.6	3.8	4.8
Feeding regime	TMR, twice a d, grazing	TMR, twice a d	TMR, twice a d	TMR, once a d	TMR, twice a d	
Milking system	2×4-stall herringbone milking parlour	2×5-stall herringbone milking parlour	2×2×12-stall herringbone milking parlour	72-stall rotary milking parlour	2×2×12-stall parallel milking parlour	
Milking frequency	twice a d	twice a d	twice a d	three times a d	three times a d	
Average daily milk yield (kg)	24.3	23.2	28.4	31.4	28.7	

**Supplementary Table S2.** Cow characteristics (means  $\pm$  SD) for investigation farms

Farm No (number of focal animals)	Experimental period	Age (years)	Parity	Days in milk	Daily milk yield (kg)	Body condition score <sup>†</sup>
Farm 1 (n = 43)	Oct–Nov 2012	6.1 $\pm$ 1.0	3.2 $\pm$ 0.4	160.2 $\pm$ 13.6	25.5 $\pm$ 3.1	3.0 $\pm$ 0.3
Farm 2 (n = 27)	Nov 2013	5.8 $\pm$ 0.8	2.8 $\pm$ 0.3	163.3 $\pm$ 12.4	24.4 $\pm$ 2.6	2.9 $\pm$ 0.4
Farm 3 (n = 55)	Oct–Nov 2013	5.9 $\pm$ 1.1	2.9 $\pm$ 0.4	152.3 $\pm$ 10.8	30.2 $\pm$ 4.1	2.8 $\pm$ 0.3
Farm 4 (n = 58)	Oct–Nov 2013	5.7 $\pm$ 0.7	3.0 $\pm$ 0.3	159.8 $\pm$ 12.2	33.9 $\pm$ 4.6	3.1 $\pm$ 0.3
Farm 5 (n = 36)	Oct 2013	6.0 $\pm$ 0.9	3.1 $\pm$ 0.5	148.4 $\pm$ 10.7	31.3 $\pm$ 4.3	2.9 $\pm$ 0.3

<sup>†</sup>ranging from 1 = very lean to 5 = fat