

Supplementary Materials: A Case Study of Behaviour and Performance of Confined or Pastured Cows during the Dry Period

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Table S1. Cow-based assessment means \pm SD of cows housed on either pasture ($n = 14$) or in freestalls ($n = 14$) during the dry period.

Parameter	Day							
	DO		CA		PP1		PP2	
	Freestall	Pasture	Freestall	Pasture	Freestall	Pasture	Freestall	Pasture
Hygiene score ¹	2.07 \pm 0.27	2.14 \pm 0.36	3.00 \pm 0.68	2.79 \pm 0.89	2.85 \pm 0.80	2.64 \pm 0.93	2.42 \pm 0.67	2.36 \pm 0.50
Locomotion score ²	1.36 \pm 0.63	1.57 \pm 0.65	1.64 \pm 0.74	1.93 \pm 0.73	1.77 \pm 1.10	1.93 \pm 0.73	1.58 \pm 0.79	1.64 \pm 0.84
Body condition score ³	3.41 \pm 0.25	3.29 \pm 0.41	3.25 \pm 0.23	3.06 \pm 0.41	3.06 \pm 0.25	2.95 \pm 0.38	3.04 \pm 0.30	2.80 \pm 0.34
Weight, kg	668.6 \pm 40.5	676.8 \pm 95.0	695.8 \pm 37.4	655.3 \pm 79.0	651.3 \pm 58.3	632.9 \pm 72.3	636.7 \pm 48.1	619.1 \pm 78.4

¹ Hygiene measured using scoring system by (Reneau et al. [1]); ² Locomotion measured using scoring system by (Flower and Weary [2]); ³ Body condition score measured using scoring system by (Wildman et al. [3]).

Table S2. Physiological measure means \pm SD of cows housed on either pasture ($n = 14$) or in freestalls ($n = 14$) during the dry period.

Day	Housing							
	Freestall				Pasture			
	Milk Fat, %	Milk Protein, %	SCC, Cells/mL	BHBA, mg/dL	Milk Fat, %	Milk Protein, %	SCC, Cells/mL	BHBA, mg/dL
0	5.68 \pm 2.60	8.79 \pm 4.37	890,429 \pm 1,022,770	0.48 \pm 0.17	4.18 \pm 1.34	8.63 \pm 2.85	1,502,360 \pm 1,458,420	0.46 \pm 0.17
1	4.62 \pm 1.95	6.08 \pm 1.65	607,786 \pm 670,639	-	3.88 \pm 1.46	6.07 \pm 1.43	1,035,640 \pm 1,035,870	-
2	5.11 \pm 1.58	5.42 \pm 2.39	929,143 \pm 1,789,920	0.62 \pm 0.28	4.30 \pm 1.14	5.28 \pm 2.29	898,333 \pm 1,234,870	0.55 \pm 0.24
5	-	-	-	0.70 \pm 0.29	-	-	-	0.64 \pm 0.57
7	4.64 \pm 1.08	3.83 \pm 1.19	247,077 \pm 526,620	-	4.13 \pm 0.94	3.74 \pm 1.09	222,893 \pm 271,798	-
8	-	-	-	0.89 \pm 0.70	-	-	-	0.43 \pm 0.21
11	-	-	-	0.67 \pm 0.69	-	-	-	0.39 \pm 0.18
14	4.10 \pm 0.60	3.11 \pm 0.31	62,273 \pm 123,725	0.58 \pm 0.26	3.92 \pm 1.45	3.17 \pm 0.62	68,231 \pm 75,654	0.41 \pm 0.11

Table S3. Postpartum health disorder incidences of cows housed on either pasture ($n = 14$) or in freestalls ($n = 14$) during the dry period.

Housing	Health Disorder							Total Cows ¹
	Ketosis	Mastitis	Metritis	Retained Placenta	Displaced Abomasum	Prolapsed Uterus	Death	
Freestall, n	2	1	8	2	0	1	1	10
Pasture, n	1	1	5	3	1	0	0	6

¹ Total of number of cows which developed a health disorder during the study period.

References

1. Reneau, J.K.; Seykora, A.J.; Heins, B.J.; Endres, M.I.; Farnsworth, R.J.; Bey, R.F. Association between hygiene scores and somatic cell scores in dairy cattle. *J. Am. Vet. Med. Assoc.* **2005**, *227*, 1297–1301.
2. Flower, F.C.; Weary, D.M. Effect of hoof pathologies on subjective assessments of dairy cow gait. *J. Dairy Sci.* **2006**, *89*, 139–146.
3. Wildman, E.E.; Jones, G.M.; Wagner, P.E.; Boman, R.L.; Troutt, H.F., Jr.; Lesch, T.N. A dairy cow body condition scoring system and its relationship to selected production characteristics. *J. Dairy Sci.* **1982**, *65*, 495–501.



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