

**Supplementary Material**

**Metabolic adaptation to lactation of dairy cows in two contrasting facilities involving partial confinement plus grazing or total confinement**

*G. R. Mendina<sup>A,\*</sup>, J. P. Damián<sup>B</sup>, A. Meikle<sup>C</sup>, M. N. Méndez<sup>A</sup>, P. Chilibroste<sup>D</sup>, and M. L. Adrien<sup>A</sup>*

<sup>A</sup>Departamento de Ciencias Veterinarias y Agrarias, Facultad de Veterinaria, CENUR Litoral Norte, Universidad de la República, Ruta 3 km 363, Paysandú60000, Uruguay.

<sup>B</sup>Departamento de Biociencias Veterinarias, Núcleo de Bienestar Animal, Facultad de Veterinaria, Universidad de la República, Ruta 8 Km 18, Montevideo13000, Uruguay.

<sup>C</sup>Laboratorio de Endocrinología y Metabolismo Animal, Facultad de Veterinaria, Universidad de la República, Ruta 8 Km 18, Montevideo13000, Uruguay.

<sup>D</sup>Departamento de Producción Animal y Pasturas, Facultad de Agronomía, Universidad de la República, Ruta 3 km 363, Paysandú60000, Uruguay.

\*Correspondence to: G. R. Mendina Departamento de Ciencias Veterinarias y Agrarias, Facultad de Veterinaria, CENUR Litoral Norte, Universidad de la República, Ruta 3 km 363, Paysandú 60000, Uruguay  
Email: g.rmendina@gmail.com

**Metabolic adaptation to lactation of dairy cows in two contrasting facilities  
involving partial confinement plus grazing or total confinement**

G. R. Mendina, J. P. Damián, A. Meikle, M. N. Méndez, P. Chilbroste, M. L. Adrien

**Supplementary Table S1.**

Means  $\pm$  standard deviation (sd) of number of lactation (NL), expected calving date (ECD, date  $\pm$  sd in days), body weight (BW, kg), and body condition score (BCS, 1-5 scale) during dry period, used to construct the blocks and randomly distribute the animals into treatments

	Treatments		
	CB-TMR	CB-GRZ	OD-GRZ
Autumn			
NL	3.4 $\pm$ 1.2	3.5 $\pm$ 1.2	3.4 $\pm$ 0.9
ECD	3/22/2019 $\pm$ 9	3/22/2019 $\pm$ 9	3/22/2019 $\pm$ 8
BW	690 $\pm$ 81	686 $\pm$ 72	680 $\pm$ 78
BCS	3.1 $\pm$ 0.44	3.0 $\pm$ 0.43	3.0 $\pm$ 0.43
Spring			
NL	2.7 $\pm$ 0.9	2.8 $\pm$ 1.2	2.6 $\pm$ 1.2
ECD	8/10/2019 $\pm$ 13	8/10/2019 $\pm$ 11	8/11/2019 $\pm$ 14
BW	631 $\pm$ 70	630 $\pm$ 61	613 $\pm$ 55
BCS	2.8 $\pm$ 0.20	2.8 $\pm$ 0.21	2.7 $\pm$ 0.24

**Metabolic adaptation to lactation of dairy cows in two contrasting facilities involving partial confinement plus grazing or total confinement**

G. R. Mendina, J. P. Damián, A. Meikle, M. N. Méndez, P. Chilbroste, M. L. Adrien

**Supplementary Table S2.**

Average chemical composition of pasture utilized by compost barn – grazing (CB-GRZ) and outdoor soil-bedded – grazing (OD-GRZ), in each season of experimental period

	DM	NEI <sup>1</sup>	CP <sup>2</sup>	NDF <sup>2</sup>	ADF <sup>2</sup>
Autumn	33.6	1.46	11.8	60.0	30.9
Winter	22.2	1.62	18.8	47.9	21.0
Spring	24.3	1.60	15.6	51.4	22.4

<sup>1</sup> Expressed as Mcal/kg DM. Calculated as  $=(3.2-0.028*ADF)*0.62$ , according to McLeod & Minson (1976).

<sup>2</sup> Expressed as % of DM.