The effect of grazing system and level of concentrate protein feeding on milk production and N use efficiency of dairy cows on peat meadows

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Supplementary material

Table S1: concentrate composition fed for the low crude protein (LP) and high protein (HP) level.

Composition[1]	**LP**	**HP**
VEM	1015	1000
CP (g kg^{-1})	93	184
OEB	-43	48
DVE (g kg^{-1})	91.6	88.9
Components (%)		
Maize	37.6	37.6
EU pulp	23.8	8
Citrus pulp	19	13.3
Molasses cane	7.3	5
PO-10%-fatty acids		2.3
MB rape	8.4	
Rapeseed meal		30
Urea		1.3
Oils + minerals	3.9	2.5

[1]OEB = "Onbestendig Eiwit Balans" = the rumen-degradable protein balance [1]; DVE = "Darm Verteerbaar Eiwit" = intestinal digestible protein [1]; VEM = "Voeder Eenheid Melk"= net energy content (1000 g VEM kg DM^{-1}; 6.9 kJ NEL (Net Energy for Lactation) [2], [3])

References

[1] CVB, *Veevoedertabel 2012*. Lelystad, The Netherlands: Centraal Veevoederbureau, 2012.

[2] A. J. H. Van Es, "Feed evaluation for dairy cows," *Livest. Prod. Sci.*, vol. 2, no. 2, pp. 95–107, Jun. 1975.

[3] A. J. H. Van Es, "Feed evaluation for ruminants. I. The systems in use from May 1977-onwards in The Netherlands," *Livest. Prod. Sci.*, vol. 5, no. 4, pp. 331–345, Oct. 1978.

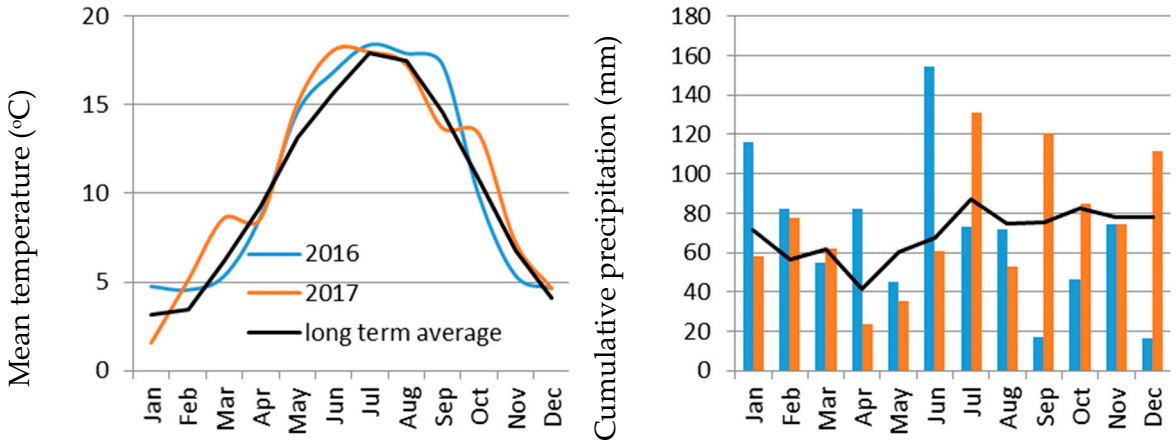

Figure S1. Mean monthly temperature and precipitation in 2016 and 2017 compared to the long term average (since 1980) for KTC Zegveld (KNMI weatherstation De Bilt).

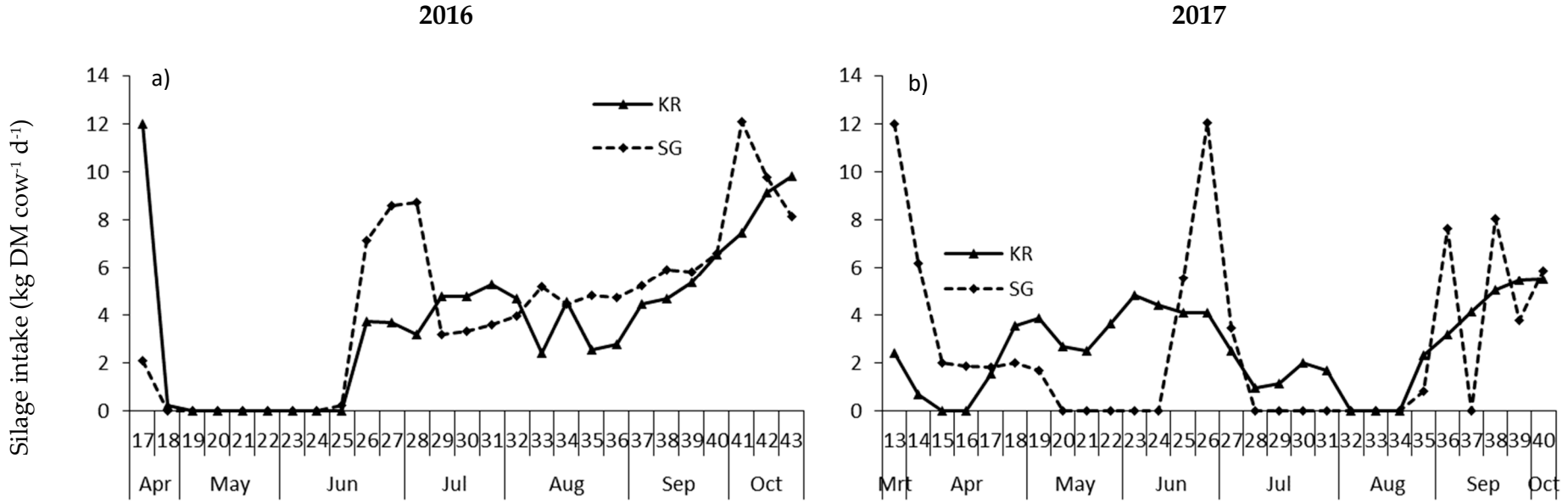

Figure S2. Mean daily grass silage intake (kg DM cow^{-1} d^{-1}) for the kurzrasen (KR) and strip-grazing (SG) grazing systems during 2016 and 2017.

Table S2. Regression output of the effect of grazing system and CP concentration of the LP diet or milk urea content on the difference in FPCM production in the LP compared to the HP feeding level ($\delta FPCM_{LP-HP}$).

	2016			2017		
	F value	P[1]	R^2adj	F value	P	R^2adj
System_SG	9.97	***	0.37	8.77	**	0.44
CP_conc_LP	14.65	**		38.83	***	
System:CP_Con_LP	14.9	***		4.35	*	
System_SG	0.005	Ns	0.65	2.87	ns	0.38
Milk urea	16.69	**		10.46	**	
System:Milk urea	14.15	***		1.89	ns	

[1] Significant differences are denoted by *** ($p < 0.001$) ; ** ($p < 0.01$); * ($p < 0.05$); ns = not significant