Oikos

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Appendix 1

Model selection

Table A1. Forward model selection on how the content of different chemicals variables per m^2 predict the biomass of the droppings found in a plot. The random factors site and date (nested in site) were included in all models. The first model contained only the intercept. The different factors were independently added in order to test all possibilities. Their effects were addressed using the AIC. The difference between the AIC of the starting model and the AIC of the model with the added variable was calculated (AIC without – AIC with). When this value was larger than 2, the factor contributed significantly to the model (shown in bold). The final model was the model to which none of the factors significantly contributed and is shown in bold.

Model structure: fixed factors	Added variable	AIC	AIC without – AIC with
Intercept		341.6	
	N content (g)	343.1	–1.5
	ADF content (g)	342.4	–0.8
	Sugar content (g)	**338.3**	**3.3**
	Amino acid content (g)	343.2	–1.6
	Anion content (g)	343.5	–1.9
Intercept + Sugar content (g)		**338.3**	
	N content (g)	337.5	0.8
	ADF content (g)	337.7	0.6
	Amino acid content (g)	336.9	1.4
	Anion content (g)	338.8	–0.5

Table A2. Backwards model selection on how the content of different chemical variables per m^2 predict the biomass of the droppings found in a plot. During every step the least significant variable was removed from the full model. The random factors site and date (nested in site) were included in all models. The most parsimonious model was selected using AIC. The difference between the AIC of the larger model and the AIC of the model with one variable removed was calculated (AIC without – AIC with), e.g. the first row gives the importance of the ADF content and the second of amino acid content. When this differences is smaller than 2, the variable did not significantly contribute to the model and could be removed. The final model is shown in bold.

Model structure: fixed factors	AIC	AIC without – AIC with
Intercept + N content (g) + ADF content (g) + sugar content (g) + amino acid content (g) + anion content (g)	342.8	–2
Intercept + N content (g) + sugar content (g) + amino acid content (g) + anion content (g)	340.8	–2
Intercept + N content (g) + sugar content (g) + anion content (g)	338.8	–1.3
Intercept + N content (g) + sugar content (g)	337.5	0.8
Intercept + sugar content (g)	**338.3**	**3.3**
Intercept	341.6	

Table A3. Forward model selection on how abundance-weighted PCA scores over all species per plot predict the biomass of the droppings found in a plot. For details: see Table 1.

Model structure: fixed factors	Added variable	AIC	AIC without – AIC with
Intercept		341.6	
	PC 1 score	**336.2**	**5.4**
	PC 2 score	343.5	–1.9
Intercept + PC 1 score		**336.2**	
	PC 2 score	337.5	–1.3

Table A4. Backwards model selection on how the abundance-weighted PCA scores over all species per plot predict the biomass of the droppings found in a plot. For details: see Table 2.

Model structure: fixed factors	AIC	AIC without – AIC with
Intercept + PC 1 score * PC 2 score	339.1	-1.6
Intercept + PC 1 score + PC 2 score	337.5	-1.3
Intercept + PC 1 score	**336.2**	**5.4**
Intercept	341.6	