

Supplementary data in addition to:

Mettrop et al.: The ecological effects of water level fluctuation and phosphate enrichment in mesotrophic peatlands are strongly mediated by soil chemistry (Ecological Engineering)

APPENDIX B.1 - 2

Appendix B.1. Total N- and P-contents and N:P ratios of above-ground vascular plant tissue upon different treatments, as measured at the end of the experiment. Means with standard deviations are shown (n=4).

Treatment	Plant P (g kg ⁻¹)	Plant N (g kg ⁻¹)	Plant N:P (g g ⁻¹)
Stobbenribben (ST)			
0 cm	0.27 (0.06)	12.3 (1.2)	46.9 (7.7)
0 cm P-rich	0.30 (0.08)	13.2 (2.1)	45.7 (10.8)
-15 cm to +15 cm	0.33 (0.12)	12.5 (3.0)	39.2 (5.4)
-15 cm to +15 cm P-rich	0.73 (0.18)	14.0 (2.4)	18.7 (2.9)
+15 cm to -15 cm	0.37 (0.20)	14.9 (3.8)	44.6 (11.1)
+15 cm to -15 cm P-rich	0.57 (0.29)	22.5 (5.9)	43.0 (10.6)
Binnenpolder Tienhoven (BPT)			
0 cm	0.82 (0.24)	21.1 (2.4)	26.7 (5.3)
0 cm P-rich	0.59 (0.13)	17.4 (2.5)	29.6 (2.0)
-15 cm to +15 cm	0.51 (0.08)	12.9 (1.7)	25.6 (5.9)
-15 cm to +15 cm P-rich	1.09 (0.27)	16.3 (4.3)	15.0 (1.7)
+15 cm to -15 cm	0.49 (0.08)	16.9 (0.9)	35.0 (4.6)
+15 cm to -15 cm P-rich	0.57 (0.05)	18.7 (2.0)	32.6 (1.9)
Ilperveld (ILP)			
0 cm	0.80 (0.09)	11.6 (2.3)	14.4 (1.3)
0 cm P-rich	0.91 (0.24)	11.9 (2.1)	13.5 (2.4)
-15 cm to +15 cm	0.56 (0.10)	11.7 (5.7)	20.2 (6.4)
-15 cm to +15 cm P-rich	0.78 (0.18)	11.4 (2.9)	14.7 (3.0)
+15 cm to -15 cm	0.91 (0.29)	13.5 (2.4)	15.4 (2.8)
+15 cm to -15 cm P-rich	0.85 (0.16)	15.7 (5.5)	18.5 (4.2)

Appendix B.2. Effects of water level, water quality and their interaction on porewater chemistry, as tested by a linear mixed model with LSD post hoc analyses for each location separately. F-ratios including denominator d.f. in parentheses are shown with their level of significance: * $P \leq 0.05$, ** $P \leq 0.01$. Different letters indicate significant differences ($P \leq 0.05$) between water level treatments.

Variable	Quality (d.f.=1)	Level (d.f.=5)	Level*Quality (d.f.=5)	Period 1			Period 2		
				0 cm	-15 cm	+15 cm	0 cm	-15 cm	+15 cm
Stobbenribben (ST)				0 cm	-15 cm	+15 cm	0 cm	-15 cm	+15 cm
Soil height	0.07 (58.6)	53.98** (55.4)	4.78** (55.4)	b	b	c	b	c	a
pH	0.03 (76.8)	15.56** (76.8)	1.46 (76.8)	b	b	b	b	b	a
Alkalinity	0.61 (57.3)	30.88** (57.3)	0.71 (57.3)	d	b	c	d	e	a
Ca	0.27 (52.9)	25.41** (32.1)	1.47 (32.1)	b	a	bc	a	c	a
Fe	2.14 (67.9)	35.54** (55.5)	1.45 (55.5)	cd	b	d	c	e	a
S	0.47 (39.4)	43.82** (31.7)	0.79 (31.7)	b	c	b	b	a	d
o-PO ₄	0.25 (75.1)	26.44** (46.0)	0.74 (46.0)	b	ab	b	b	c	a
NO ₃	0.06 (30.7)	39.03** (18.9)	0.08 (18.9)	a	a	a	a	a	b
NH ₄	0.03 (44.0)	25.39** (43.5)	2.11 (43.5)	c	b	cd	c	d	a
DOC	0.00 (94.1)	9.45** (70.7)	2.22 (70.7)	b	b	a	c	ab	b
Binnenpolder Tienhoven (BPT)				0 cm	-15 cm	+15 cm	0 cm	-15 cm	+15 cm
Soil height	0.41 (48.9)	28.16** (45.8)	1.42 (45.8)	b	b	c	b	c	a
pH	2.45 (77.7)	45.71** (73.3)	1.40 (73.3)	b	c	b	bc	a	d
Alkalinity	3.93 (73.3)	66.86** (71.2)	1.63 (71.2)	c	a	b	c	d	b
Ca	1.13 (50.0)	115.80** (33.9)	1.16 (33.9)	d	a	b	d	e	c
Fe	0.12 (63.9)	99.21** (44.6)	1.16 (44.6)	d	b	d	c	d	a
S	0.00 (59.2)	121.87** (42.1)	1.70 (42.1)	b	c	b	b	a	c
o-PO ₄	0.32 (49.9)	46.37** (44.0)	3.11* (44.0)	c	b	d	b	c	a
NO ₃	0.31 (37.2)	21.00** (34.2)	0.67 (34.2)	a	b	a	a	a	b
NH ₄	0.99 (52.0)	54.52** (38.9)	21.17** (38.9)	c	b	d	c	bc	a
DOC	0.17 (41.7)	89.50** (37.6)	152.44** (37.6)	b	b	c	b	b	a
Ilperveld (ILP)				0 cm	-15 cm	+15 cm	0 cm	-15 cm	+15 cm
Soil height	7.04* (50.2)	75.01** (50.1)	2.66* (50.1)	c	c	d	b	bc	a
pH	0.00 (64.9)	23.84** (64.0)	7.14** (64.0)	bc	c	c	b	b	a
Alkalinity	0.08 (70.6)	60.27** (68.1)	4.13** (68.1)	c	b	d	cd	e	a
Ca	0.00 (76.9)	4.64** (61.4)	0.41 (61.4)	b	a	c	b	d	a
Fe	2.77 (63.6)	32.84** (41.8)	1.30 (41.8)	b	a	b	b	c	a
S	0.03 (74.9)	109.54** (48.8)	0.71 (48.8)	b	c	b	b	a	c
o-PO ₄	0.75 (55.9)	45.14** (41.8)	1.20 (41.8)	c	b	e	c	d	a
NO ₃	1.20 (59.8)	6.59** (44.1)	0.46 (44.1)	a	b	a	a	a	c
NH ₄	0.51 (55.6)	12.12** (35.2)	1.21 (35.2)	b	a	c	b	b	a
DOC	0.23 (80.1)	3.42** (65.5)	2.50 (65.5)	ab	ab	b	b	a	b