

Supplementary Material

Table S1 Leaf and root traits, as well as soil factors measured in this study.

	Parameter name	Abridge
Leaf	Specific leaf area (cm ² /g)	SLA
	Leaf dry matter content (g/g)	DM _{leaf}
	Leaf C content (%)	C _{leaf}
	Leaf N content (%)	N _{leaf}
	Leaf Carbon to Nitrogen Ratio	CN _{leaf}
	Photosynthetic rate (μmol CO ₂ /m ² /s)	PN
Root	Root tissue density (g/cm ³)	RTD
	Root C content (%)	C _{root}
	Root N content (%)	N _{root}
	Root Carbon to Nitrogen Ratio	CN _{root}
Soil	Potential of hydrogen	pH
	Soil C content (%)	C _{soil}
	Soil N content (%)	N _{soil}
	Soil Carbon to Nitrogen Ratio	CN _{soil}
	Soil Moisture Content (%)	Humidity

Table S2 The mean values of plant traits at community scale, *C.dactylon*, *X.strumarium* and *A.theophrasti* under different flooding intensity.

	Flooding intensity (FI)	N _{leaf} (%)	C _{leaf} (%)	CN _{leaf}	N _{root} (%)	C _{root} (%)	CN _{root}	PN (μmol CO ₂ /m ² /s)	SLA (%)	RTD (%)	N _{soil} (%)	C _{soil} (%)	CN _{soil}	pH	Humidity
Community	High flooding intensity	2.57	39.46	16.47	0.92	37.95	46.39	15.08	6.11	13.04	0.13	1.95	22.92	8.21	32.21
	Medium flooding intensity	2.93	39.35	14.32	0.79	37.31	51.13	13.13	33.78	1.45	0.10	1.94	18.62	8.13	29.73
	Low flooding intensity	3.19	40.18	13.52	0.64	38.34	73.64	30.48	33.56	1.28	0.08	2.01	22.48	7.72	25.83

<i>Cynodon dactylon</i>	High flooding intensity	2.28	40.88	18.59	0.92	38.58	46.19	15.22	1.33	2.12	0.14	2.00	23.68	8.15	30.16
	Medium flooding intensity	2.30	40.19	18.23	0.79	36.36	49.15	23.35	2.20	1.65	0.11	2.14	21.76	8.17	26.31
	Low flooding intensity	4.99	40.18	10.21	0.96	46.39	48.32	7.83	4.81	0.88	1.44	5.21	20.59	8.04	32.88
<i>Abutilon theophrasti</i>	High flooding intensity	4.91	39.27	8.17	0.86	37.44	47.54	6.54	79.22	1.36	0.10	1.97	19.99	8.11	28.66
	Medium flooding intensity	3.52	38.77	11.05	0.80	39.86	52.36	1.58	74.82	3.98	0.13	2.31	18.11	8.24	26.78
<i>Xanthium strumarium</i>	Medium flooding intensity	3.46	38.36	11.19	0.84	39.00	52.60	8.96	64.72	0.84	2.09	0.17	17.85	8.22	31.51
	Low flooding intensity	4.27	39.96	9.36	1.64	46.29	28.22	2.15	46.71	3.08	1.11	3.37	3.03	8.60	37.39