

Supplementary Material

Effects of nutrient supply on carbon and water economies of C₄ grasses

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Table S1. Specific leaf area, stomatal density, and leaf vein density of six savanna grasses

Different letters indicate significant differences between species (Mann-Whitney U test, $P < 0.05$, Bonferroni corrected, $n=8$; for *M. repens* $n=5$).

Species	Specific leaf area (m ² kg ⁻¹)			Stomatal density (number mm ⁻²)			Vein density (number mm ⁻¹)		
	Mean	± s.e.		Mean	± s.e.		Mean	± s.e.	
<i>A. congesta</i>	23.58	1.53	a	141.8	9.8	b	6.9	0.3	a
<i>C. virgata</i>	39.73	1.34	b	264.4	20.9	a	9.6	0.5	bc
<i>H. contortus</i>	27.8	3.60	a	101.9	5.2	cd	10.9	0.4	c
<i>M. repens</i>	26.62	1.36	a	99.9	12.1	bcd	7.7	0.5	ab
<i>P. squarrosa</i>	23.97	0.97	a	110.5	3.3	bc	5.8	0.4	a
<i>S. sanguineum</i>	28.63	1.46	a	77.3	3.3	d	9.9	0.4	bc

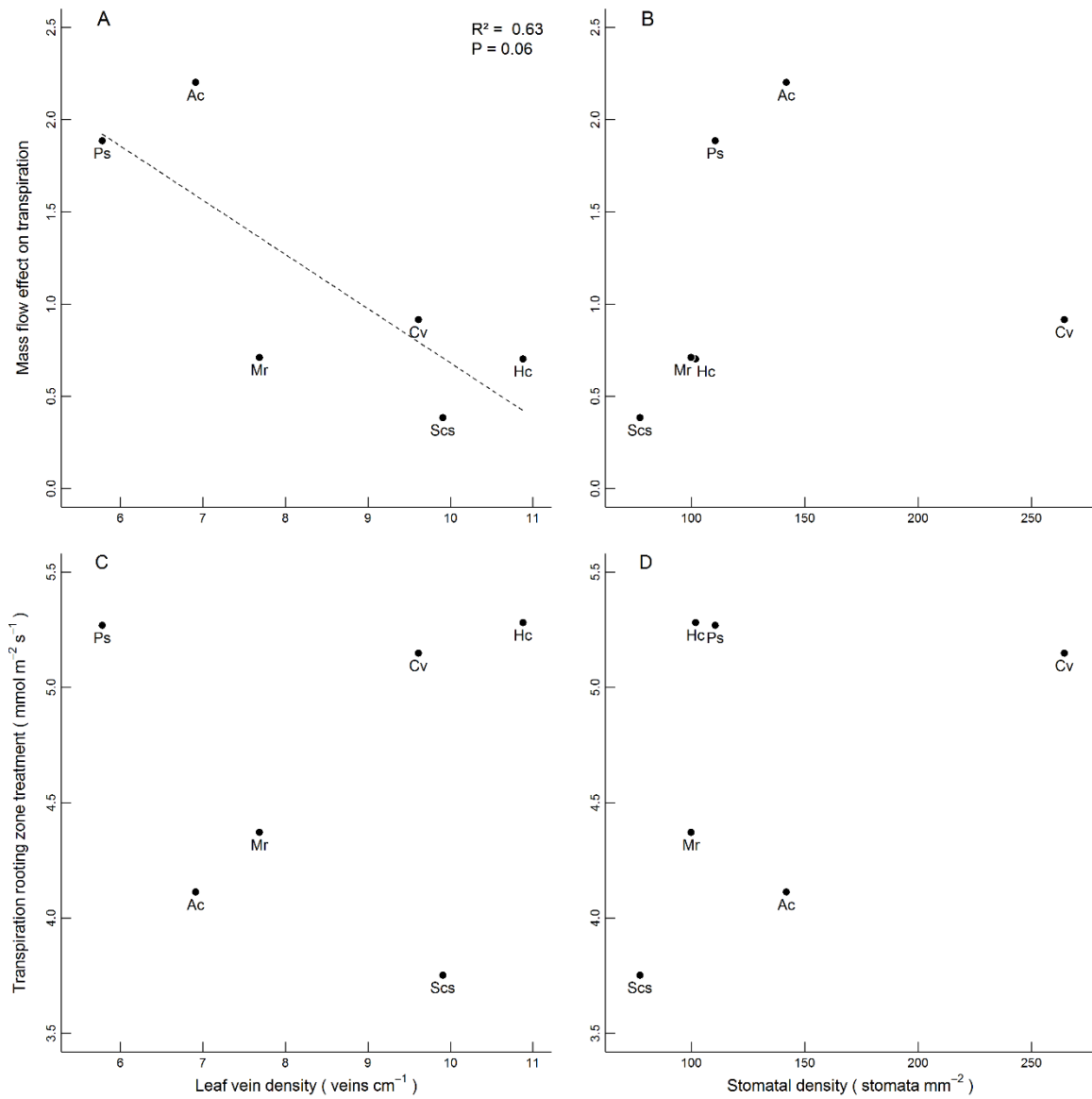


Fig. S1. Relationships between the mass flow effect on transpiration and the leaf vein density (A) or the stomatal density (B) and between the transpiration in the rooting zone treatment and the leaf vein density (C) or the stomatal density (D). Effects are calculated from species means as: (spatially separated – no added nutrients) / (rooting zone – no added nutrients). Ac = *A. congesta*, Cv = *C. virgata*, Hc = *H. contortus*, Mr = *M. repens*, Ps = *P. squarrosa*, Scs = *S. sanguineum*.

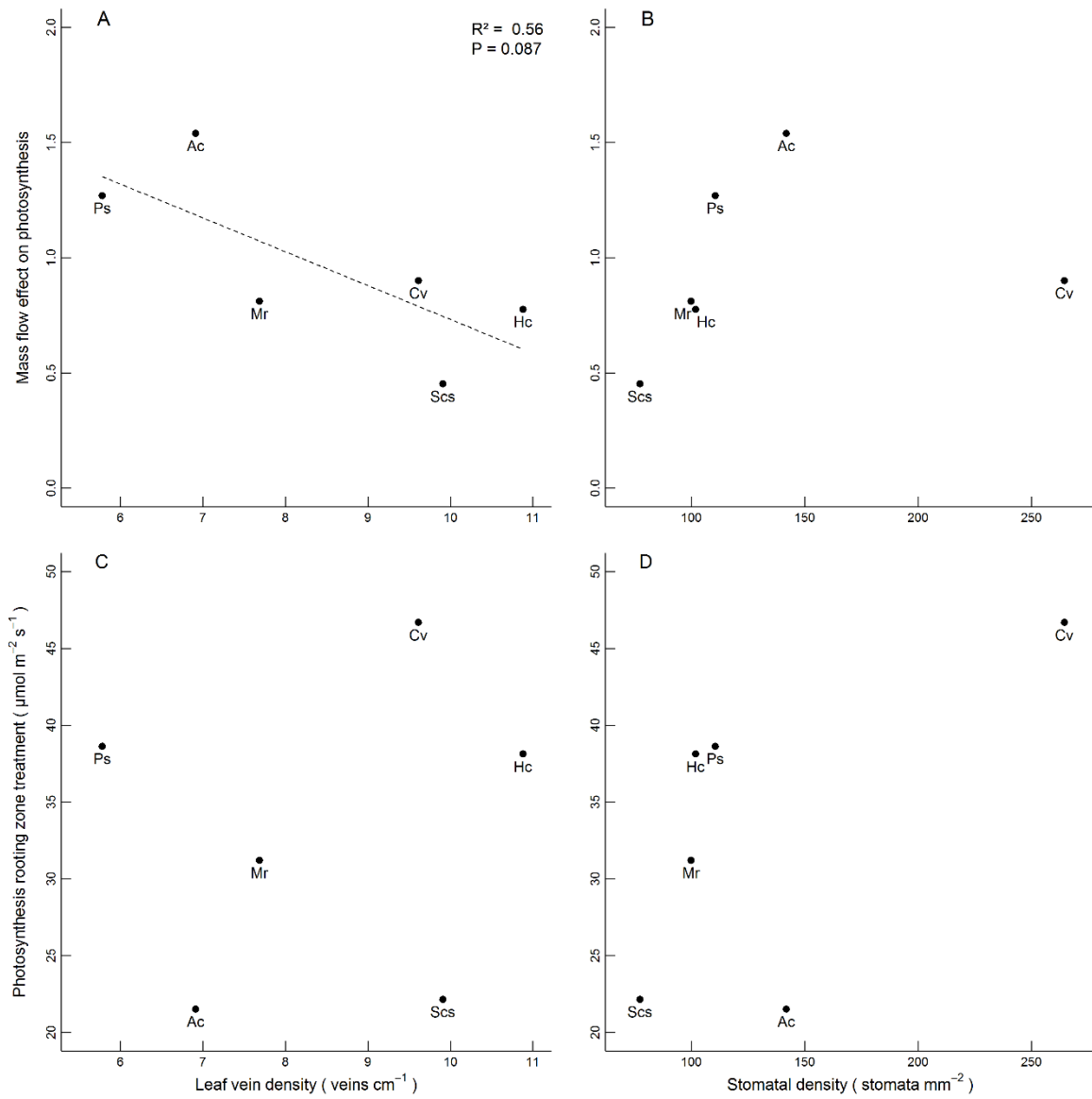


Fig. S2. Relationships between the mass flow effect on photosynthesis and the leaf vein density (A) or the stomatal density (B) and between the photosynthesis in the rooting zone treatment and the leaf vein density (C) or the stomatal density (D). Effects are calculated from species means as: (spatially separated – no added nutrients) / (rooting zone – no added nutrients). Ac = *A. congesta*, Cv = *C. virgata*, Hc = *H. contortus*, Mr = *M. repens*, Ps = *P. squarrosa*, Scs = *S. sanguineum*.