

Supplementary Material

Biomass partitioning and ionomics of *Macadamia* with high manganese and low phosphorus concentrations

Xin Zhao^A, Yang Lyu^A, Qianqian Dong^A, Xiyong He^B, Hai Yue^B, Liping Yang^B, Liang Tao^B, Lidan Gong^B, Hongxu Zheng^A, Sijie Wen^A, Hans Lambers^{A,C}, and Jianbo Shen^{A,}*

^ADepartment of Plant Nutrition, College of Resources and Environmental Sciences, Key Laboratory of Plant-Soil Interactions, Ministry of Education, National Academy of Agriculture Green Development, China Agricultural University, Beijing 100193, P. R. China.

^BYunnan Institute of Tropical Crops, Jinghong, Yunnan 666100, P. R. China.

^CSchool of Biological Sciences and Institute of Agriculture, The University of Western Australia, 35 Stirling Highway, Perth, WA 6009, Australia.

*Correspondence to: Jianbo Shen Department of Plant Nutrition, China Agricultural University, No. 2 Yuan-ming-yuan West Road, Beijing 100193, P. R. China Email: jbshen@cau.edu.cn

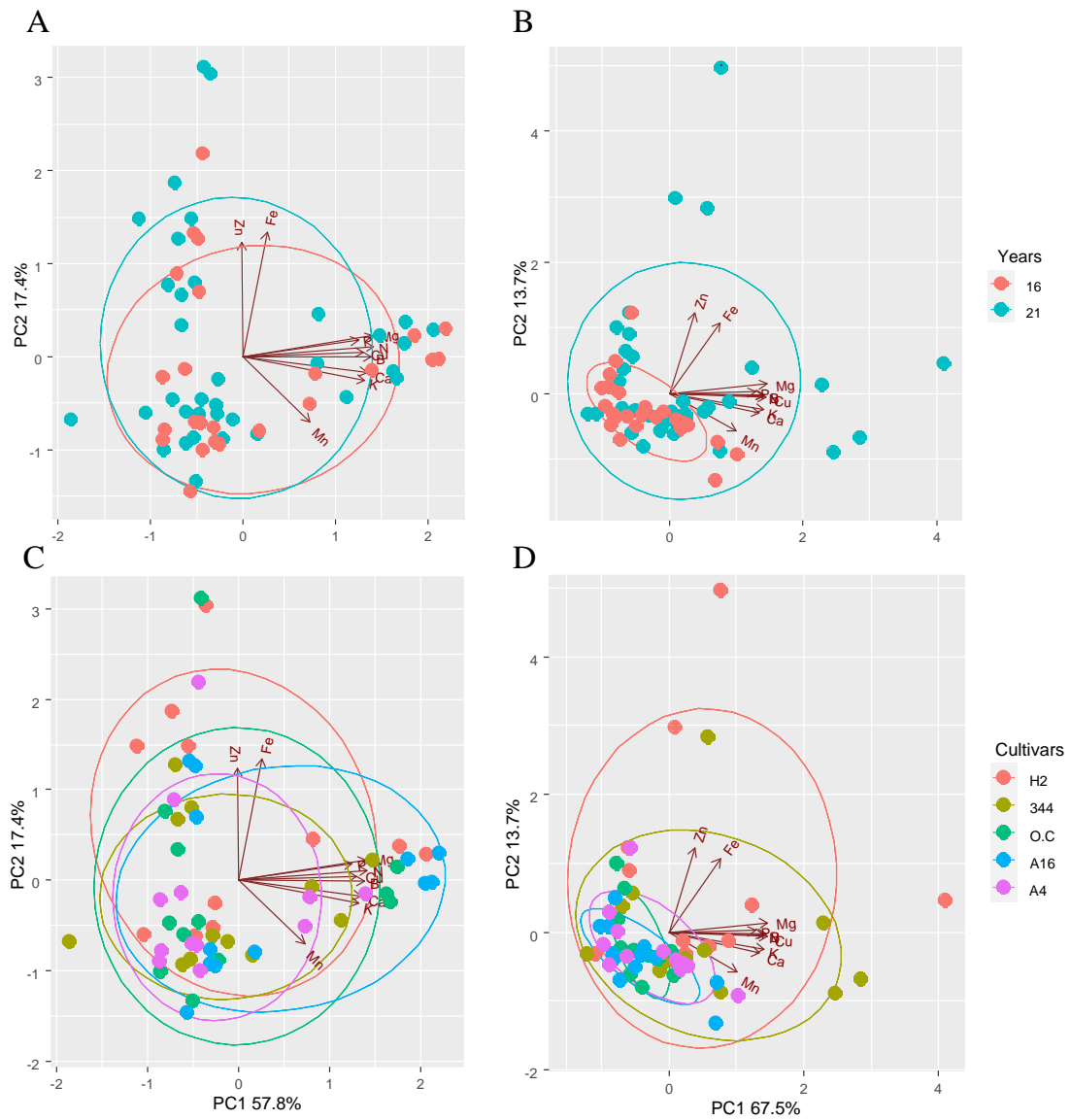


Fig. S1 Analysis of variation of nutrient concentrations (A, C) and contents (B, D) between trees of different ages (A, B) and among cultivars (C, D) using principal component analysis (PCA).

Table S1 Two-way analysis of variance (ANOVA) of the effects of cultivars and plant organs on nutrient concentrations in trees of the same age (21 or 16 years) of *Macadamia*. *F* means *F*-value and *P* means *P*-value.

Years	Source	N		P		K		Ca		Mg		Fe		Mn		B		Cu		Zn	
		<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>
		g kg ⁻¹										mg kg ⁻¹									
21	Cultivars	2.28	0.12	0.13	0.88	4.51	0.02	0.47	0.63	4.46	0.02	3.83	0.04	1.79	0.19	2.51	0.10	0.05	0.95	2.04	0.15
	Plant organs	108	<0.01	67.31	<0.01	47.06	<0.01	44.42	<0.01	27.82	<0.01	46.90	<0.01	3.91	0.021	58.85	<0.01	20.10	<0.01	3.52	0.03
16	Cultivars	4.07	0.06	8.43	0.01	7.2	0.016	0.31	0.59	5.86	0.027	7.86	0.013	3.71	0.07	8.73	0.009	3.07	0.098	0.06	0.803
	Plant organs	19.61	<0.01	3.06	0.058	31.08	<0.01	18.07	<0.01	10.84	<0.01	79.55	<0.01	1.96	0.16	27.16	<0.01	1.49	0.255	5.49	0.008