

Supplementary Material

Tab. S1 - The ANOVA results (p-values) of the effects of phosphorus (Ps) addition, water treatment (Ws), and their interaction on the soil chemical properties. P_t: planting types; Ws: water treatments, Ps: phosphorus treatments, SM: soil moisture (%); pH: soil pH; DOC: Dissolve organic carbon (mg kg⁻¹ dry soil); DON: Dissolve organic nitrogen (mg kg⁻¹ dry soil); NH₄⁺-N: soil ammonium nitrogen (mg g⁻¹); NO₃⁻-N: soil nitrate nitrogen (mg g⁻¹); aP: Available phosphorus (mg P kg⁻¹soil).

	Soil chemical properties						
	NO ₃ ⁻ -N	NH ₄ ⁺ N	DOC	DON	aP	PH	SM
Ws	<0.001	0.53	0.338	0.227	<0.001	0.397	<0.001
Ps	0.031	0.081	0.021	0.121	<0.001	0.138	0.544
Ws × Ps	0.005	0.107	0.427	0.998	0.001	0.530	0.370

Olatunji O, Pan K, Tariq A (2018).

The responses of soil microbial community and enzyme activities of *Phoebe zhennan* cultivated under different soil moisture conditions to phosphorus addition

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Tab. S2 - ANOVA results (p-values) of the effects of phosphorus (Ps) addition, water treatment (Ws), and their interaction on the soil microbial PFLAs. P_i: planting types; WS: water treatments; Ps: phosphorus treatments; AMF: arbuscular mycorrhiza fungi; G⁻bact.; G⁻bacterial PFLAs; G⁺ bact.: G⁺ bacterial PFLAs; Total bact.: Total bacterial PFLAs; Actin.: Actinomycetes.

	PFLAs (nmol g ⁻¹)						
	Total PFLAs	AMF	Fungi PFLAs	G ⁻ bact.	G ⁺ bact.	Total bact.	Actin.
Ws	0.033	0.048	0.016	0.715	0.040	0.047	0.769
Ps	0.793	0.730	0.726	0.942	0.482	0.722	0.997
Ws × Ps	0.818	0.899	0.953	0.981	0.816	0.925	0.895

Olatunji O, Pan K, Tariq A (2018).

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Tab. S3 - ANOVA results (p-values) of the effects of phosphorus (Ps) addition, water treatment (Ws), and their interaction on the enzyme activities. P_t: planting types; Ws: water treatments; Ps: phosphorus treatments.

	Enzyme activities			
	Alkaline phosphatase (ug g hr ⁻¹)	β-fructofuranosidase (mg g soil ⁻¹ hrs ⁻¹)	B-glucosidase (mg kg ⁻¹ hrs ⁻¹)	Urease (ug N-NH ₄ g ⁻¹ hrs ⁻¹)
Ws	0.021	0.139	0.001	0.011
Ps	0.051	0.055	0.002	0.194
Ws × Ps	0.003	0.061	0.865	0.436