

# Supplementary Materials: Mitigation of Salinity Stress Effects on Broad Bean Productivity Using Calcium Phosphate Nanoparticles Application

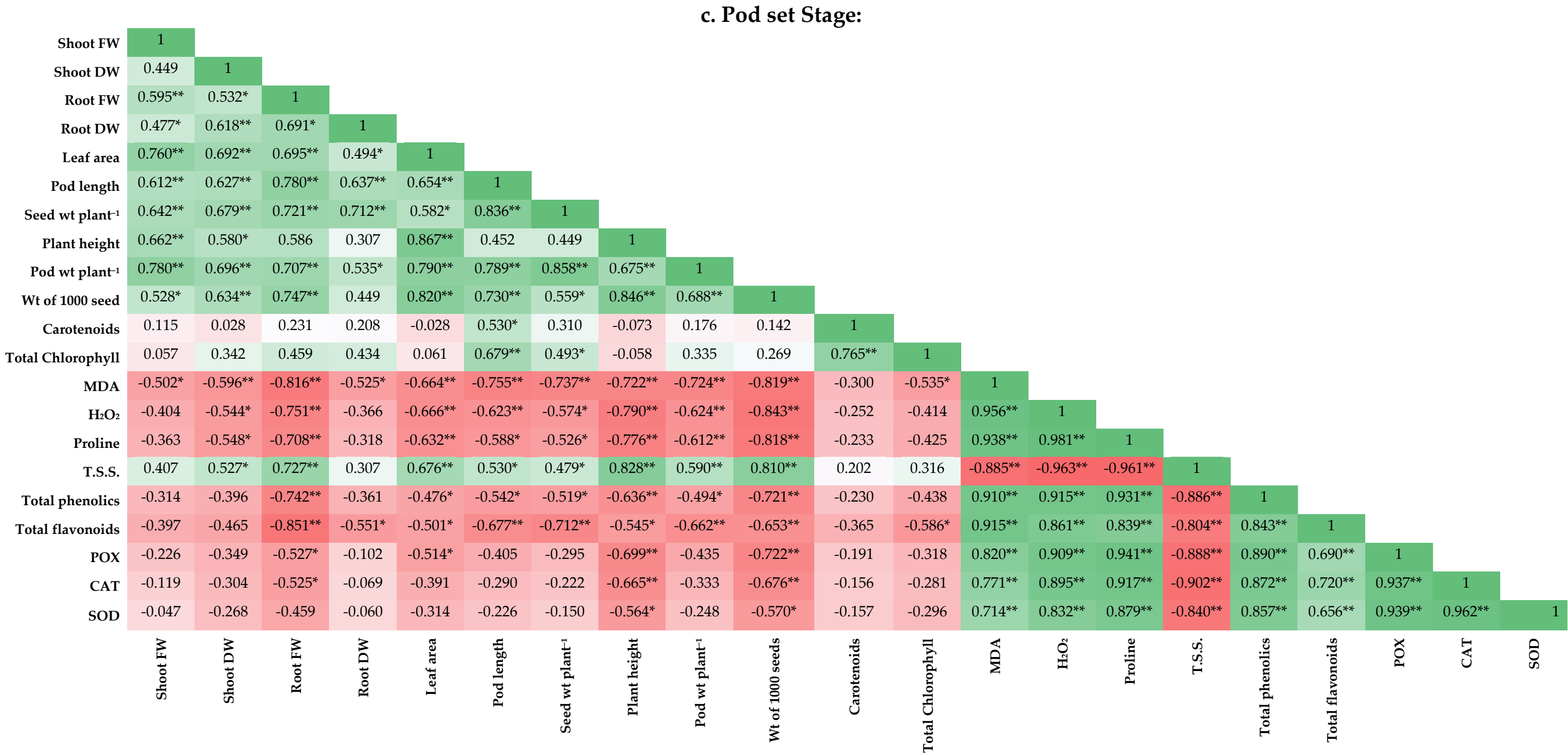
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**Table S1.** The correlation matrix heatmap shows the values of the Pearson correlation coefficient for all studied parameters.

a. Vegetative Stage																					
Shoot FW	1																				
Shoot DW	0.449	1																			
Root FW	0.595**	0.532*	1																		
Root DW	0.477*	0.618**	0.691**	1																	
Leaf area	0.760**	0.692	0.695**	0.494*	1																
Pod length	0.612**	0.627**	0.780**	0.637**	0.654**	1															
Seed wt plant <sup>-1</sup>	0.642**	0.679**	0.721**	0.712**	0.582*	0.836**	1														
Plant height	0.662**	0.580	0.586	0.307	0.867**	0.452	0.449	1													
Pod wt plant <sup>-1</sup>	0.780**	0.696**	0.707**	0.535*	0.790**	0.789**	0.858**	0.675**	1												
Wt of 1000 seed	0.528*	0.634**	0.747**	0.449	0.820**	0.730**	0.559*	0.846**	0.688**	1											
Carotenoids	0.434	0.545*	0.660**	0.219	0.633**	0.677**	0.502*	0.664**	0.635**	0.767**	1										
Total Chlorophyll	0.626**	0.778**	0.693**	0.434	0.847**	0.708**	0.641**	0.861**	0.766**	0.879**	0.846**	1									
MDA	-0.499	-0.654**	-0.822**	-0.580*	-0.676**	-0.749**	-0.762**	-0.697**	-0.787**	-0.795**	-0.718**	-0.779**	1								
H <sub>2</sub> O <sub>2</sub>	-0.478*	-0.542*	-0.743**	-0.414	-0.576*	-0.616**	-0.580*	-0.750**	-0.637**	-0.767**	-0.850**	-0.814**	0.831**	1							
Proline	0.001	-0.142	-0.239	0.220	-0.325	-0.073	0.023	-0.581*	-0.156	-0.524*	-0.614**	-0.487*	0.449	0.609**	1						
T.S.S.	0.482	0.528	0.106	0.293	0.539	0.200	0.231	0.322	0.352	0.264	0.056	0.353	0.038	0.123	0.324	1					
Total phenolics	-0.204	-0.384	-0.646**	-0.236	-0.473*	-0.530*	-0.406	-0.622**	-0.439	-0.740**	-0.744**	-0.650**	0.800**	0.839**	0.813**	0.362	1				
Total flavonoids	-0.084	-0.290	-0.454	-0.093	-0.302	-0.399	-0.261	-0.536*	-0.282	-0.656**	-0.651**	-0.535*	0.658**	0.768**	0.844**	0.414	0.950**	1			
POX	-0.258	-0.365	-0.600**	-0.189	-0.458	-0.485*	-0.405	-0.586*	-0.464	-0.646**	-0.742**	-0.630**	0.781**	0.802**	0.829**	0.366	0.950**	0.899**	1		
CAT	-0.031	-0.237	-0.435	0.020	-0.366	-0.163	-0.093	-0.616**	-0.220	-0.574*	-0.672**	-0.556*	0.607**	0.749**	0.933**	0.386	0.889**	0.851**	0.879**	1	
SOD	-0.181	-0.338	-0.618**	-0.259	-0.404	-0.512*	-0.410	-0.551*	-0.436	-0.674**	-0.706**	-0.594**	0.793**	0.824**	0.790**	0.443	0.977**	0.932**	0.966**	0.866**	1
	Shoot FW	Shoot DW	Root FW	Root DW	Leaf area	Pod length	Seed wt plant <sup>-1</sup>	Plant height	Pod wt plant <sup>-1</sup>	Wt of 1000 seeds	Carotenoids	Total Chlorophyll	MDA	H <sub>2</sub> O <sub>2</sub>	Proline	T.S.S.	Total phenolics	Total flavonoids	POX	CAT	SOD

b. Flowering Stage

Shoot FW	1																				
Shoot DW	0.449	1																			
Root FW	0.595**	0.532*	1																		
Root DW	0.477*	0.618**	0.691**	1																	
Leaf area	0.760**	0.692**	0.695**	0.494*	1																
Pod length	0.612**	0.627**	0.780**	0.637**	0.654**	1															
Seed wt plant <sup>-1</sup>	0.642**	0.679**	0.721**	0.712**	0.582*	0.836**	1														
Plant height	0.662**	0.580*	0.586*	0.307	0.867**	0.452	0.449	1													
Pod wt plant <sup>-1</sup>	0.780**	0.696**	0.707**	0.535*	0.790**	0.789**	0.858**	0.675**	1												
Wt of 1000 seed	0.528*	0.634**	0.747**	0.449	0.820**	0.730**	0.559*	0.846**	0.688**	1											
Carotenoids	0.284	0.286	0.289	0.250	0.177	0.605**	0.407	0.040	0.427	0.223	1										
Total Chlorophyll	0.533*	0.673**	0.581*	0.426	0.637**	0.805**	0.657**	0.577*	0.751**	0.703**	0.721**	1									
MDA	-0.152	-0.414	-0.678**	-0.304	-0.490*	-0.402	-0.417	-0.658**	-0.442	-0.696**	-0.161	-0.509*	1								
H <sub>2</sub> O <sub>2</sub>	-0.388	-0.607**	-0.783**	-0.425	-0.684**	-0.640**	-0.625**	-0.776**	-0.688**	-0.849**	-0.281	-0.667**	0.935**	1							
Proline	-0.279	-0.397	-0.600**	-0.249	-0.559*	-0.480*	-0.417	-0.704**	-0.512*	-0.735**	-0.167	-0.480*	0.824**	0.878**	1						
T.S.S.	0.540*	0.654**	0.813**	0.565*	0.670**	0.806**	0.710**	0.653**	0.717**	0.777**	0.454	0.796**	-0.738**	-0.859**	-0.771	1					
Total phenolics	-0.154	-0.270	-0.517*	-0.131	-0.406	-0.383	-0.312	-0.580*	-0.354	-0.641**	-0.087	-0.305	0.770**	0.803**	0.957**	-0.655**	1				
Total flavonoids	0.111	-0.147	-0.360	0.016	-0.173	-0.118	-0.086	-0.462	-0.141	-0.481*	-0.032	-0.286	0.813**	0.711**	0.830**	-0.538*	0.826**	1			
POX	-0.392	-0.386	-0.660**	-0.297	-0.579*	-0.641**	-0.540*	-0.632**	-0.596**	-0.741**	-0.371	-0.565*	0.748**	0.850**	0.938**	-0.798**	0.914**	0.688**	1		
CAT	-0.065	-0.215	-0.432	0.016	-0.357	-0.177	-0.100	-0.630**	-0.217	-0.602**	-0.019	-0.301	0.831**	0.777**	0.898**	-0.596**	0.907**	0.943**	0.773**	1	
SOD	-0.186	-0.210	-0.354	-0.022	-0.406	-0.294	-0.196	-0.594**	-0.322	-0.606**	-0.106	-0.330	0.644**	0.689**	0.927**	-0.597**	0.927**	0.813**	0.881**	0.886**	1
	Shoot FW	Shoot DW	Root FW	Root DW	Leaf area	Pod length	Seed wt plant <sup>-1</sup>	Plant height	Pod wt plant <sup>-1</sup>	Wt of 1000 seeds	Carotenoids	Total Chlorophyll	MDA	H <sub>2</sub> O <sub>2</sub>	Proline	T.S.S.	Total phenolics	Total flavonoids	POX	CAT	SOD



Shoot FW: shoot fresh weight, Shoot DW: shoot dry weight, Root FW: root fresh weight, Root DW: root dry weight, Seed wt plant<sup>-1</sup>: seed weight per plant, Pod wt plant<sup>-1</sup>: pod weight per plant, Wt of 1000 seeds: weight of 1000 seeds, MDA: malondialdehyde, H<sub>2</sub>O<sub>2</sub>: hydrogen peroxide, T.S.S.: total soluble sugars, POX: peroxidase, CAT: catalase, SOD: superoxide dismutase.

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).