Supplementary data

Table S1: Physico-chemical characteristics of soil used in experiment.

Sr.No.	Parameters	Values
1	Soil pH	7.63
2	EC (dS/m)	0.59
3	Texture	Clay loam
4	Total Organic matter (%)	0.83
5	Water holding capacity (%)	62
6	Nitrate Nitrogen (mg Kg^{-1})	61.3
7	Phosphorus (mg Kg^{-1})	32.7
8	Potassium (mg Kg^{-1})	684.3
9	Sodium (mg Kg^{-1})	39.7
10	Magnesium (mg Kg^{-1})	328.8
11	Iron (mg Kg^{-1})	2876.1
12	Lead (mg Kg^{-1})	4.28

Table S2: Summary of Box-Behnken Design.

Box-Behnken Design	
Factor	4
Base run	27
Base block	1
Replicates	1
Total run	27
Total blocks	1
Center points	4

Table S3: Effects of *M. paraoxydans* and citric acid on germination and growth of *P. hortorum* in Petri plates containing 1/2 Murashige and Skoog (MS) agar medium supplemented with different concentrations of Pb (0, 10, 20, 30 and 40 mg L^{-1}).

Treatments	Pb concentration	Germination (%)	Plant length (cm)	SVI
Controls	0	100^{a}	4.7^{c}	470^{c}
Pb Concentration	10	95^{b}	5.7^{ab}	541.5^{bc}
	20	87^{c}	4.1^{cd}	356.7^{d}
	30	80^{d}	2.7^{de}	216^{ef}
	40	70^{e}	1.4^{e}	98^{f}
M. paraoxydans	10	95^{b}	6.1^{ab}	579.5^{b}
(1.5 OD)	20	90^{bc}	5.2^{bc}	468^{cd}
	30	84^{cd}	3.6^{d}	302.4^{de}
	40	80^{d}	2.2^{de}	176^{ef}
Citric acid	10	95^{b}	5.3^{bc}	503.5^{bc}
(10 mmol L^{-1})	20	90^{bc}	5^{bc}	450^{cd}
	30	80^{d}	3.1^{d}	248^{de}
	40	$75d^{e}$	2^{de}	150^{ef}
M. paraoxydans	10	**98^{ab}**	**6.4^{a}**	**627.2^{a}**
(1.5 OD) + citric	20	92^{bc}	5.5^{b}	506^{bc}
acid (10 mmol L^{-1})	30	90^{bc}	3.8^{cd}	342^{cd}
	40	85^{cd}	2.5^{de}	212.5^{ef}

Values are the mean of three replicates. Different letters indicates significant difference at $p<0.05$. Whereas; Germinated seeds (GE) = ((No. of germinated seeds/total No. of seeds) *10) and seed vigor index (SVI) =GE*Length of plants.

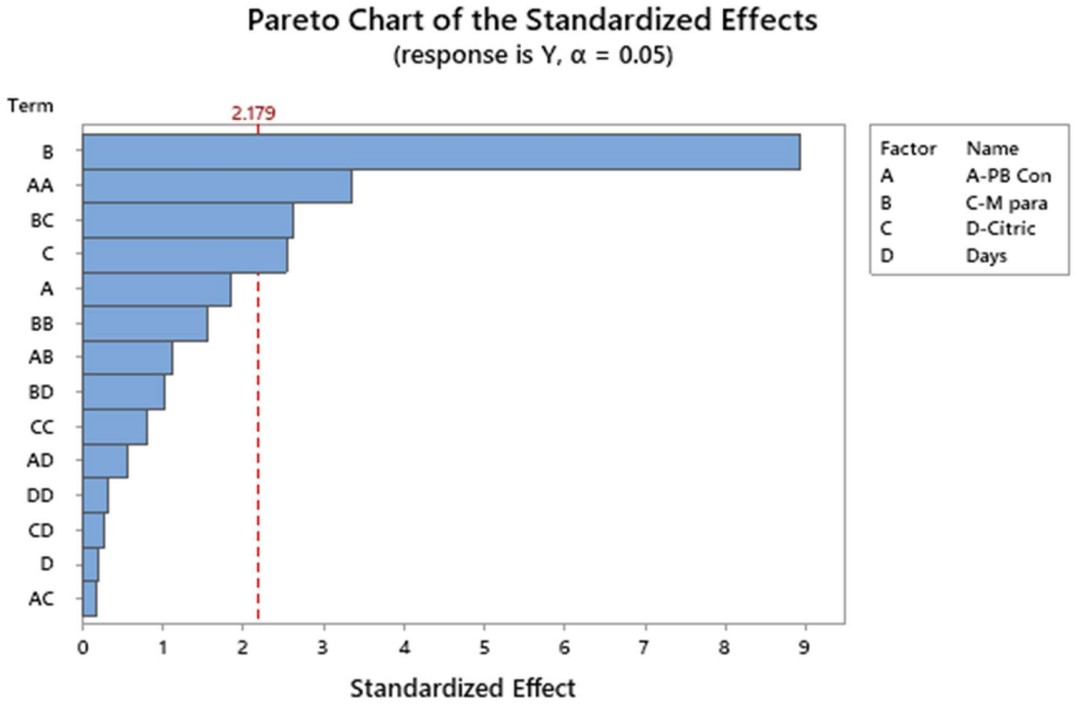

Figure S1: Standardized Effects on four factors Pareto chart.

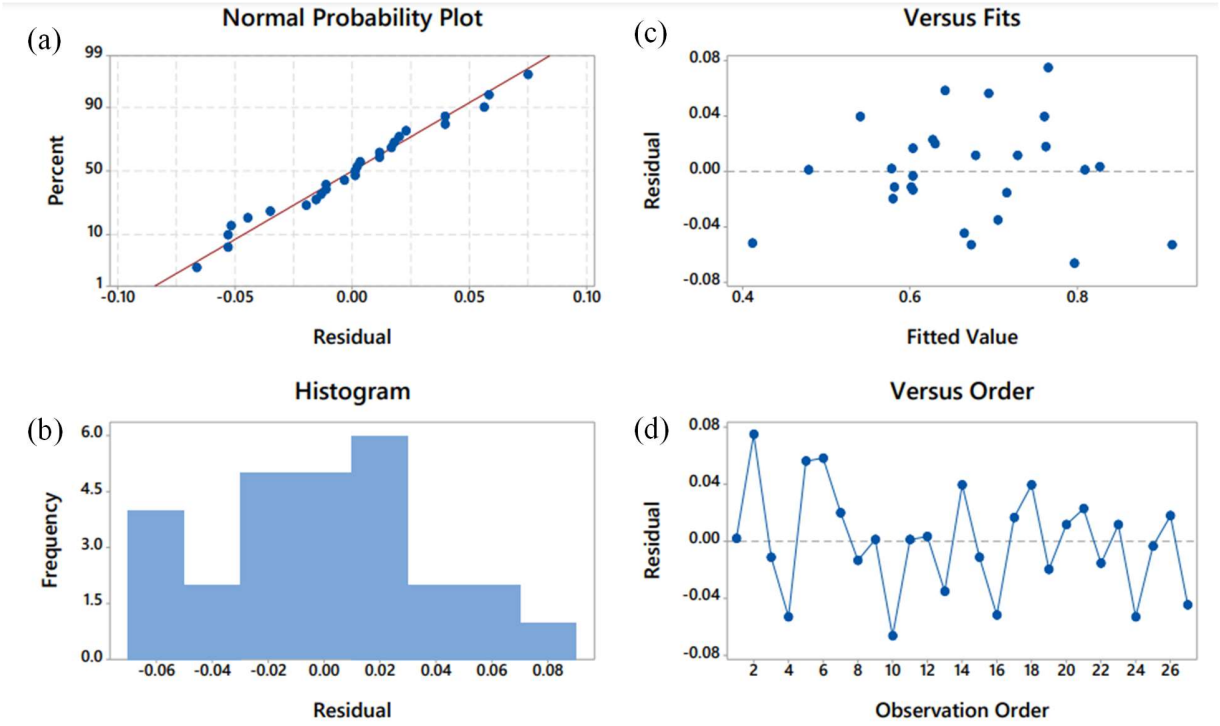

Figure S2: Results of RSM predicted model. Normal probability plot (a); Histogram plot (b); Residual plots for RSM Model Output (c and d).

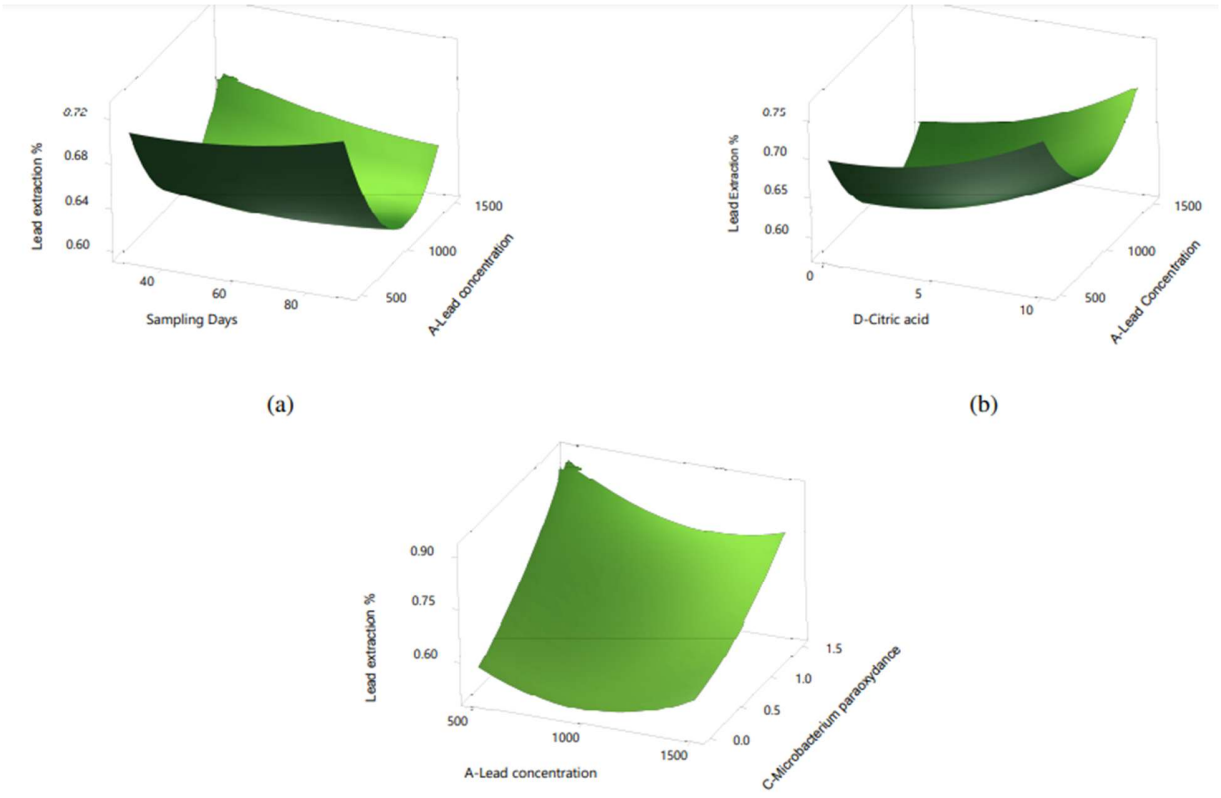

Figure S3: RSM response surface plots for lead concentration and sampling days (a); Lead concentration and citric acid (b); and lead concentration and *M. paraoxydans* (c).