Table S1 Some important characteristics of experimental site

Location	Year of initiation	Climate	Agro-ecological zone/Sub zone	Altitude (m msl)	Temperature (^{0}C)	Mean annual rainfall (mm)	Cropping system	Varieties used	Soil type
CSRTI, Mysuru 12.18°N 76.42°E	2016	Hot semi-arid	8.2	759.9	Max- 33 Min-18	710	Perennial mulberry	AGB-8, MSG-2, V-1 & G-4	Red sandy loam

Table S2. Details of the methodologies used for extraction of plant available S content in soils of the experimental site

Extractants used	Extractants composition	Soil: extractant ratio	Shaking time
$CaCl_2$ [20]	0.15% $CaCl_2$	1:5	30 min
AB-DTPA [36]	Mixture of 1.0 M NH_4HCO_3 and 0.5 M DTPA, pH 7.6	1:2	15 min
Bicarbonate [21]	0.5M $NaHCO_3$, pH 8.5	1:4	40 min
Mehlich-3 [37]	0.2 M HOAc, 0.25 M NH_4NO_3, 0.015 M NH_4F, 0.013 M HNO_3 and 0.001 M EDTA (pH 2.5 ± 0.1)	1:10	5min

Table S3. Homoscedasticity test of data grouped by varieties

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
Sconc	Based on Mean	1.415	3	44	.251
	Based on Median	1.360	3	44	.267
	Based on Median and with adjusted df	1.360	3	30.723	.273
	Based on trimmed mean	1.384	3	44	.260

Table S4. Homoscedasticity test of data grouped by replications

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
Sconc	Based on Mean	.099	2	45	.906
	Based on Median	.104	2	45	.901
	Based on Median and with adjusted df	.104	2	43.603	.901
	Based on trimmed mean	.107	2	45	.899

Table S5: Path coefficients between different S fractions and plant S concentration

Water soluble S vs. plant S		r =0.729
Direct effect		0.589
	Sorbed S	-0.100
Indirect effect via	Occluded S	0.006
	Organic S	0.234
Sorbed S vs. plant S		r = -0.453
Direct effect		0.149
	Water soluble S	-0.396
Indirect effect via	Occluded S	-0.012
	Organic S	-0.194
Occluded S vs. plant S		r = -0.151
Direct effect		-0.037
	Water soluble S	-0.096
Indirect effect via	Sorbed S	0.050
	Organic S	-0.068
Organic S vs. plant S		r = 0.686
Direct effect		0.260
	Water soluble S	0.530
Indirect effect via	Sorbed S	-0.113
	Occluded S	0.009
Residual effect		0.673

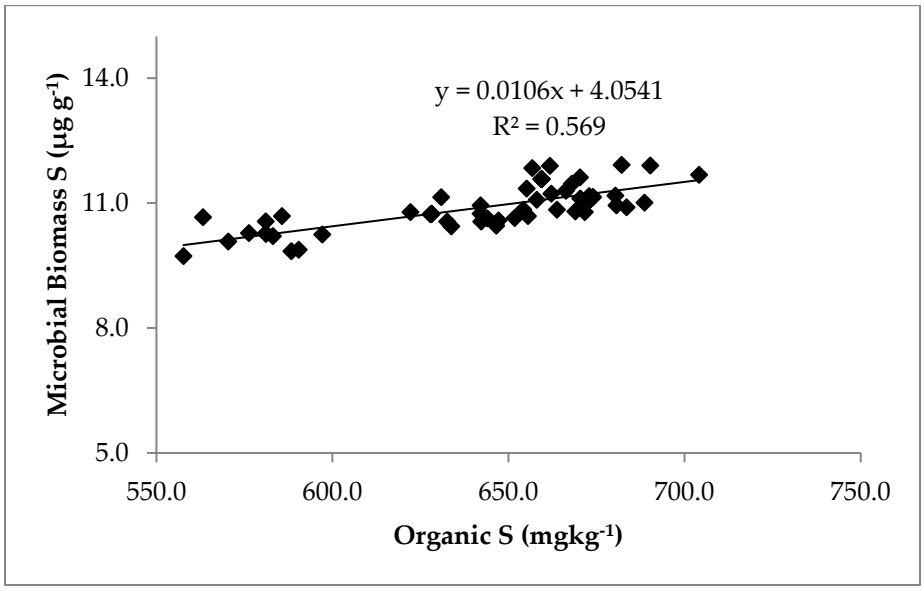

Figure S1. Relationship between organic S and microbial biomass S in the experimental soils

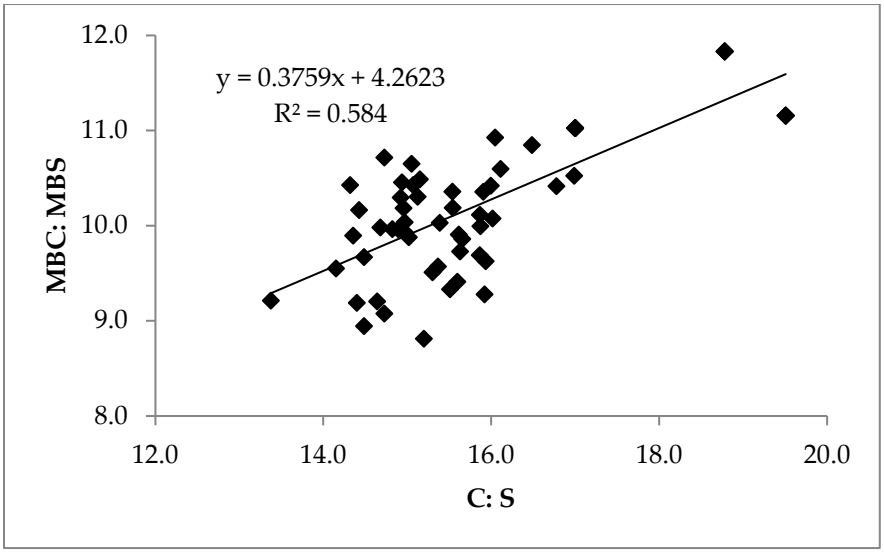

Figure S2. Relationship between the ratio of microbial biomass C to microbial biomass S and organic C to organic S

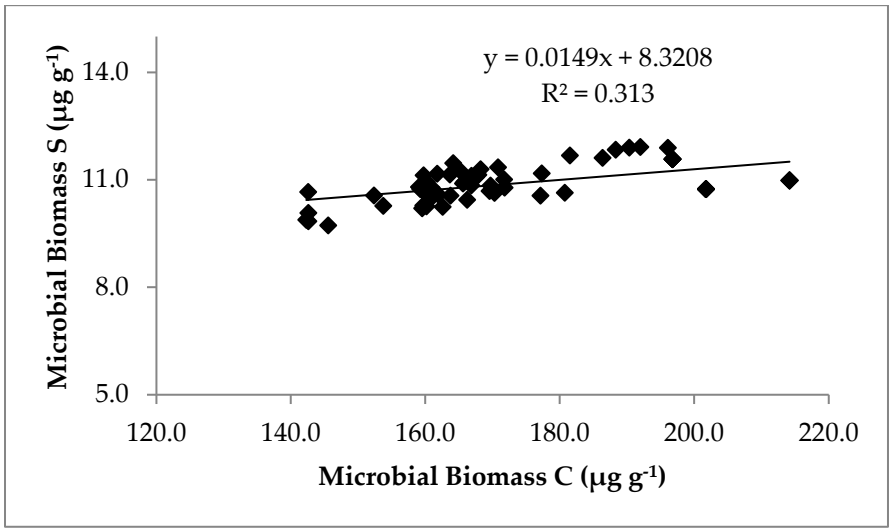

Figure S3. Relationship between microbial biomass C and microbial biomass S in the experimental soils

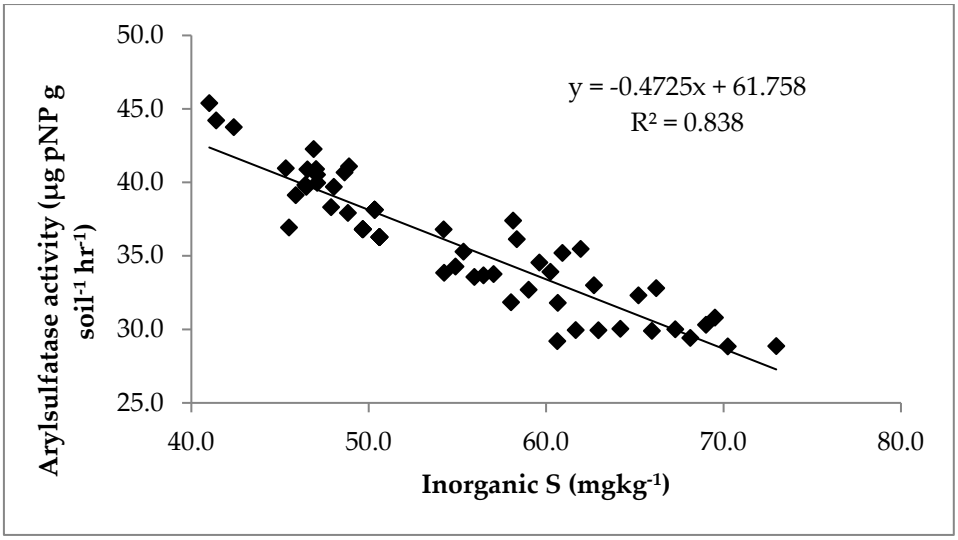

Figure S4. Relationship between inorganic S and arylsulfatase activity in the experimental soils

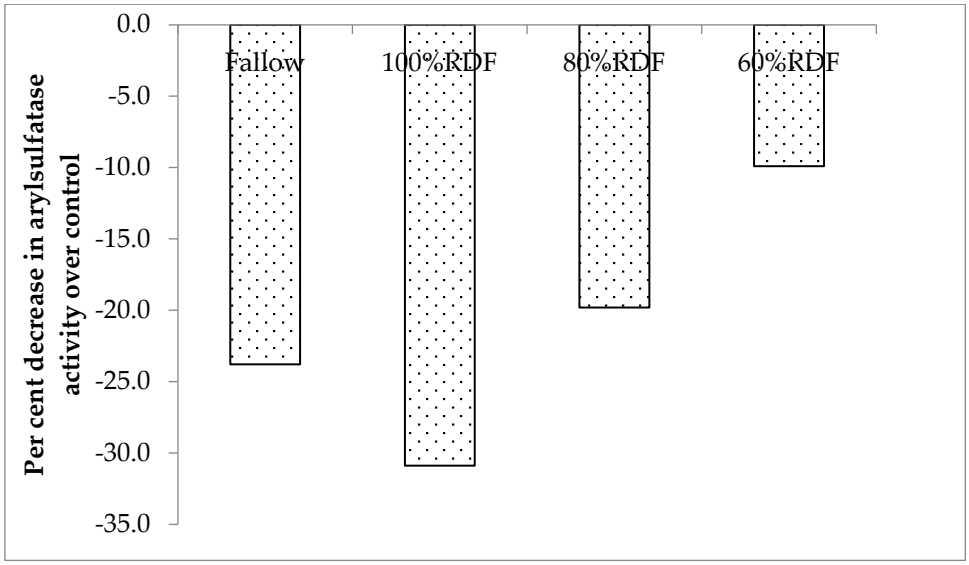

Figure S5. Relative decrease in arylsulfatase activity over unmanured control in the experimental soils

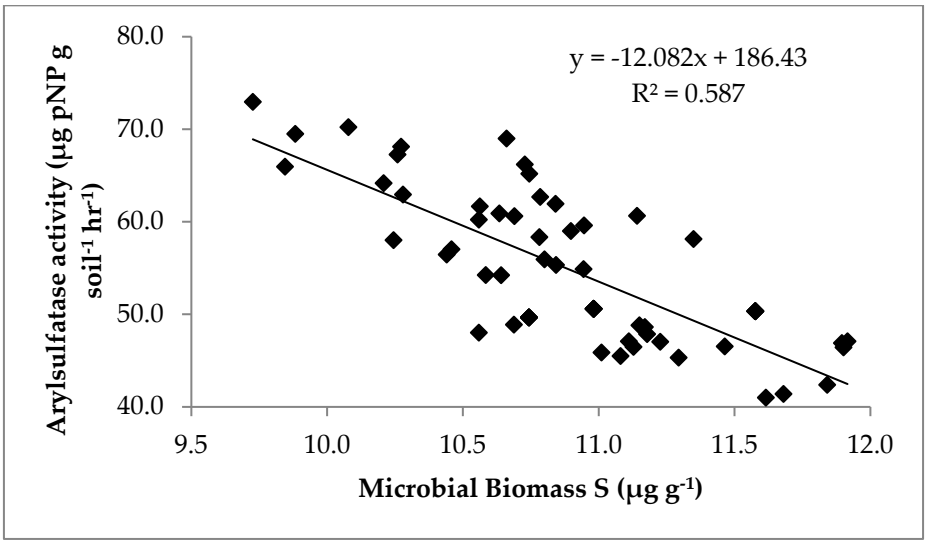

Figure S6. Relationship between the microbial biomass S and arylsulfatase activity in the experimental soils

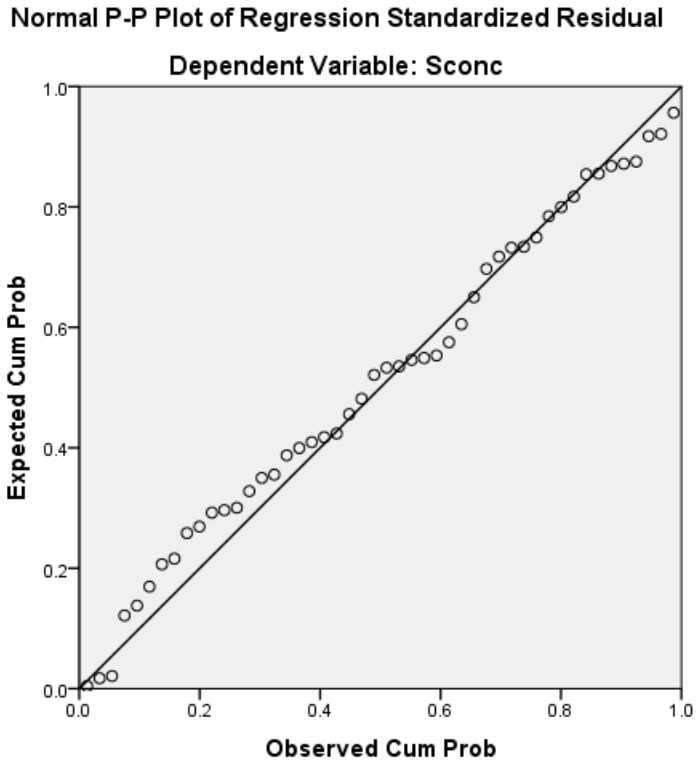

Figure S7. Normality test of data

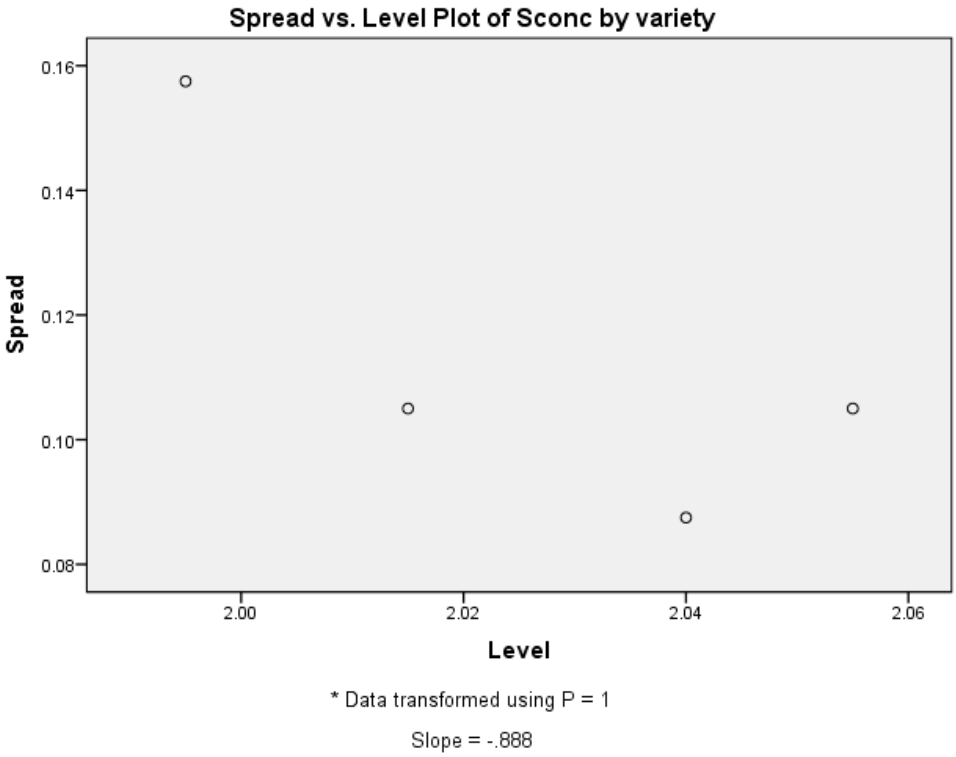

Figure S8. Homoscedasticity test of data grouped by varieties

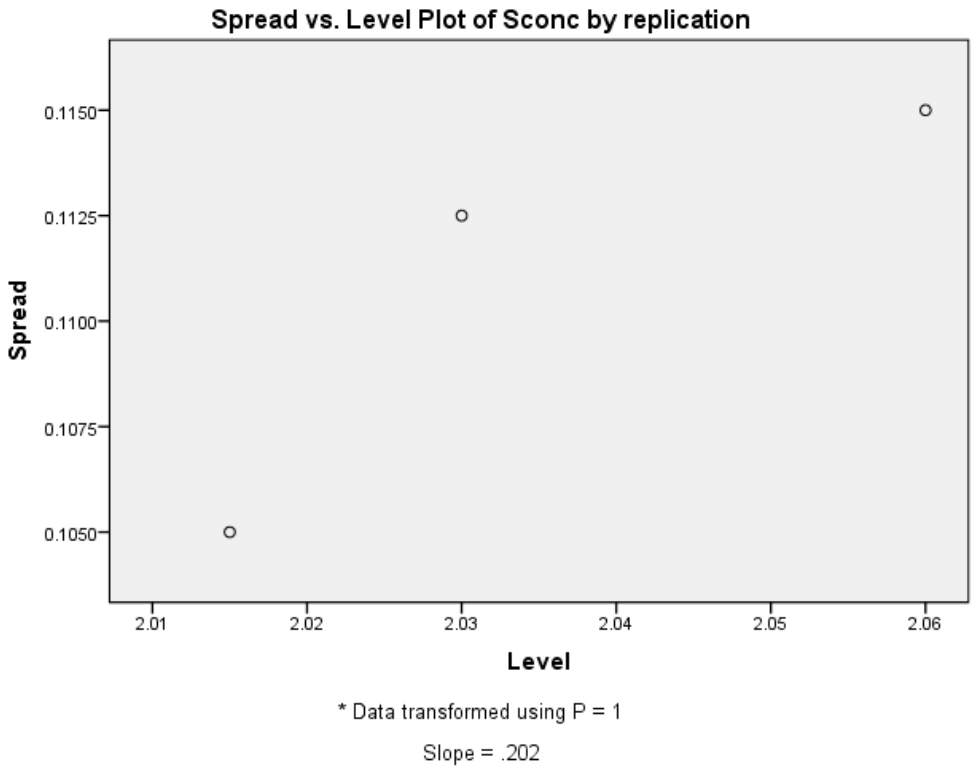

Figure S9. Homoscedasticity test of data grouped by replications

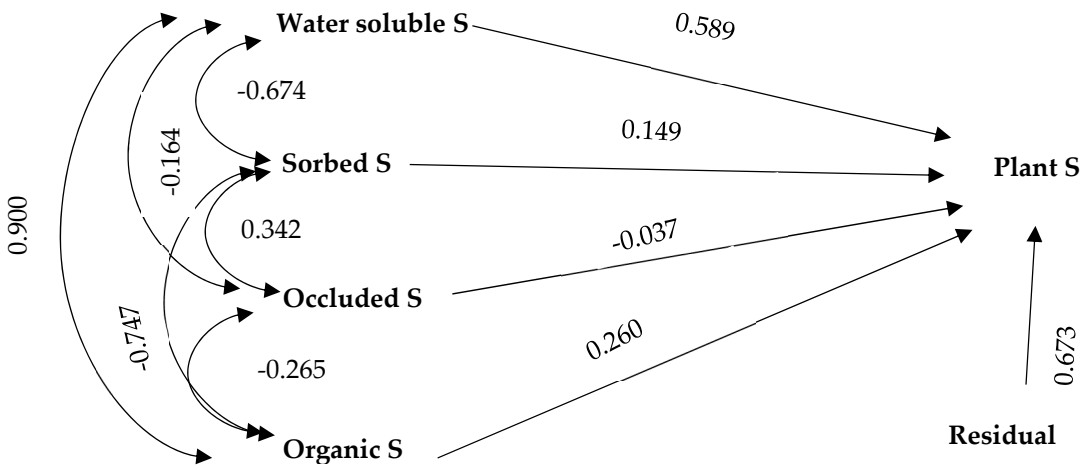

Figure S10. A path diagram and coefficient of factors influencing plant S concentration. The double and single-headed arrows indicate mutual associations and direct effect respectively. Numerical figures indicate path-coefficient values

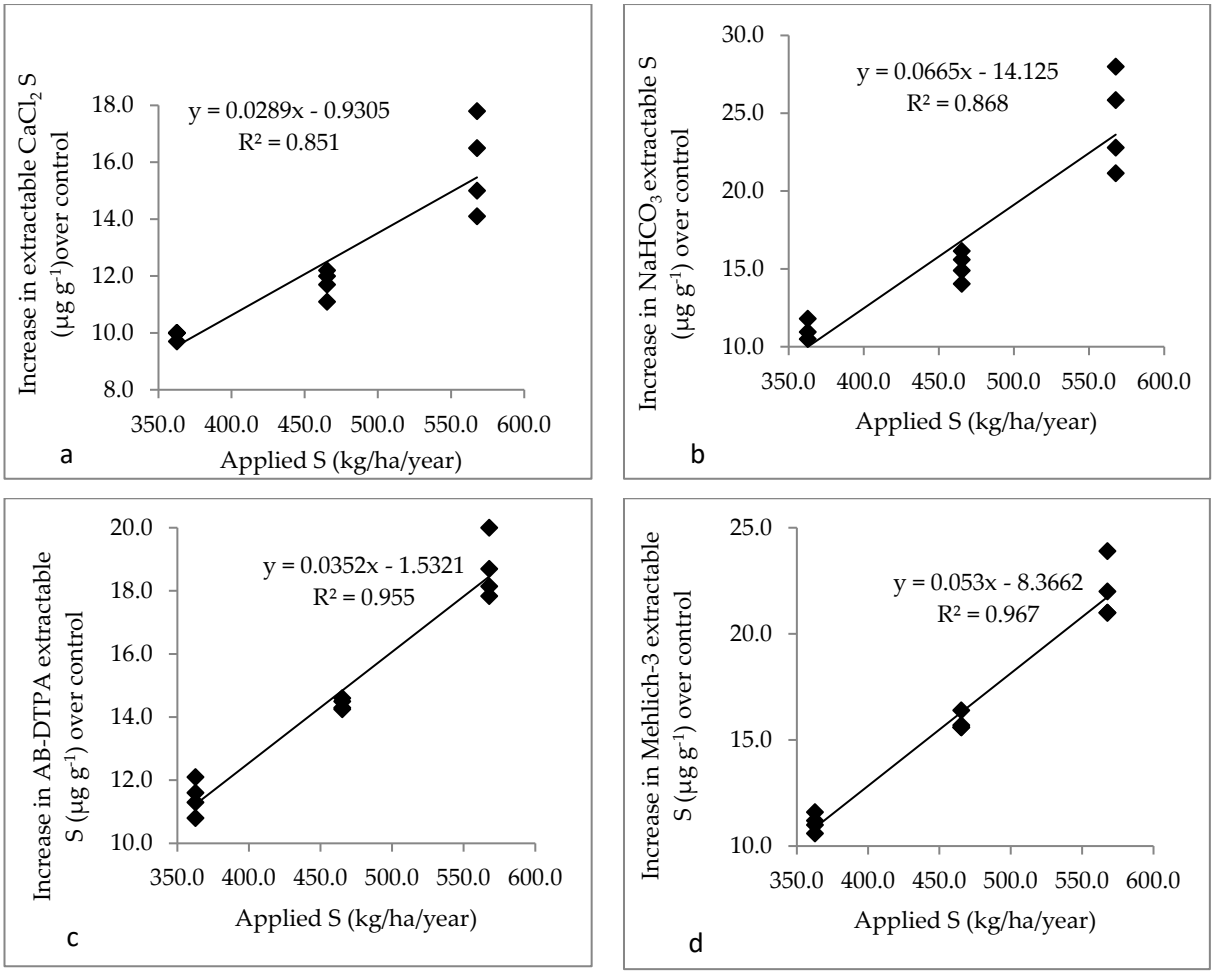

Figure S11 a, b, c & d. Relationship between the increase in extractable S content over control and the amount of S applied through chemical fertilizers and farmyard manure