Sulfate-mediated Drought Tolerance in Maize Involves Regulation at Physiological and Biochemical Levels

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Suppl. Table 1: Summary of the ANOVA for shoot length (SL), root length (RL), shoot fresh weight (SFW), root fresh weight (RFW) and shoot dry weight (SDW), root dry weight (RDW), nitrogen (N), phosphorous (P) and potassium (K) content of maize seedlings applied with various sources of sulfate fertilizers viz. K_2SO_4, $FeSO_4$, $CuSO_4$ and Na_2SO_4 at 0, 15, 30 and 45 kg ha^{-1}.

SOV	SL (cm)	RL (cm)	SFW (g)	RFW (g)	SDW (g)	RDW (g)	N (mg kg^{-1})	P (mg kg^{-1})	K (mg kg^{-1})
Sulfur sources (S)	***	***	***	***	**	**	***	*	***
Sulfur doses (L)	***	***	***	***	**	***	NS	***	***
S × L	***	NS	***	***	***	*	**	*	***
CV	4.14	4.20	5.05	5.68	9.25	9.16	7.71	8.57	11.86

[a] SOV= source of variation
[b] coefficient of variation
NS = $P \geq 0.05$; * = $P \leq 0.05$; *** = $P \leq 0.001$

Suppl. Table 2: Summary of the ANOVA for leaf relative turgidity (RT), SPAD value (Chl), photosynthetic rate (A), transpiration rate (E), stomatal conductance (g_s), sub-stomatal conductance (C_i), catalase (CAT), guaiacol peroxidase (GPX) and superoxide dismutase (SOD) activity of maize with or without exposure to drought stress and applied with optimized doses of sulfate fertilizers viz. K_2SO_4, $FeSO_4$, $CuSO_4$ and Na_2SO_4.

SOV	RT (%)	Chl (SPAD value)	A (μmol CO_2 m^{-2} s^{-1})	E (mmol H_2O m^{-2} s^{-1})	g_s (mmol H_2O m^{-2} s^{-1}	C_i (μmol H_2O m^{-2} s^{-1})	CAT (μmol H_2O_2 min^{-1} mg^{-1} protein)	GPX (μmol guaiacol min^{-1} mg^{-1} protein)	SOD (Units SOD min^{-1} mg^{-1} protein)
Drought stress (D)	***	***	***	***	***	***	***	***	***
Sulfur sources (S)	**	***	***	***	***	***	***	***	***
D × S	NS	NS	***	***	***	***	NS	NS	***
CV	4.12	4.73	8.27	8.71	10.24	10.07	12.96	21.58	12.04

[a] SOV= source of variation
[b] coefficient of variation
NS = $P \geq 0.05$; * = $P \leq 0.05$; *** = $P \leq 0.001$

Suppl. Table 3: Summary of the ANOVA for kernels per cob (KC), 1000-grain weight (GW), grain yield (GY) and biological yield (BY) of maize with or without exposure to drought stress and applied with optimized doses of sulfate fertilizers viz. K_2SO_4, $FeSO_4$, $CuSO_4$ and Na_2SO_4.

SOV	KC	GW (g)	GY (g)	BY (g)
Drought stress (D)	***	***	***	***
Sulfur sources (S)	***	***	***	***
D×S	*	**	***	NS
CV	5.08	5.45	4.09	3.75

[a] SOV= source of variation
[b] coefficient of variation
NS = $P \geq 0.05$; * = $P \leq 0.05$; *** = $P \leq 0.001$