Potential of Detecting the Sulfur Dioxide Stress on Landscape Plants in Spectral Reflectance Data (2018)

Table 1. The relative changed value of sulfur content (ΔS) in leaf with the cumulative sulfur dioxide (SO_2) stress time.

DS	0 h	2 h	4 h	6 h	8 h	10 h	12 h
R. pseudoacacia	0	0.16	-0.06	-0.37	0.07	0.40	0.34
K. paniculata	0	1.90	1.24	0.72	1.54	1.55	2.30
L. lucidum	0	-0.17	0.10	-0.12	0.14	0.20	0.26
A. buergerianum	0	0.10	-0.24	-0.23	0.55	0.27	0.25
C. camphora	0	0.50	0.44	1.02	0.07	2.91	0.76

Table showed leaf chlorophyll content changes with the cumulative SO_2 stress time. The leaf chlorophyll content was decreased in general but the decrease trends were different in different species. Leaf chlorophyll contents were significantly decreased in A. buergerianum, C. camphora and K. paniculata, and the decreased amplitude was − 0.05 or less, the greatest decreased can reached to − 0.30; chlorophyll content changes in L. lucidum was not obvious in the initial stage of stress, and after 10 h, the relative values were only lower than − 0.10. Chlorophyll content changes in R. pseudoacacia were tremendous, and leaf chlorophyll content decreased during 0–12 h, only except at 6 h.

Source : https://link.springer.com/article/10.1007/s12524-017-0717-3

Physiological characteristics of Plantago major under SO2 exposure as affected by foliar iron spray (2017)

Table 1: Effect of SO_2 exposure and foliar application of Fe on leaf concentration of chlorophyll a and b, carotenoids, shoot dry mass, and intensity of chlorosis of plantain (mean ± SE).

SO_2	Chlorophyll a		Chlorophyll b		Carotenoid			Shoot dry mass		Intensity of	
concentration								(g pot^{-1})		chlorosis (%)	
(µg m^{-3})	(mg g^{-1} FW)										
	−Fe	+Fe	−Fe	+Fe	−Fe	+Fe		−Fe	+Fe	−Fe	+Fe
0	1.85 ± 0.25b	2.15 ± 0.23a	0.47 ± 0.07b	0.56 ± 0.04a	0.29 ± 0.02b	0.36	± 0.05a	5.4 ± 0.31 b	6.48 ± 0.39a	15–20	10–15
3900	1.80 ± 0.07b	2.06 ± 0.11a	0.44 ± 0.02b	0.53 ± 0.03a	0.32 ± 0.04b	0.30	± 0.02b	5.42 ± 0.49 b	5.76 ± 0.61a	> 20	> 15

Means with similar letters are not significantly different at $P < 0.05$

Source: https://link.springer.com/article/10.1007/s11356-017-9457-8