

Linking Soil Water Changes to Soil Physical Quality in Sugarcane Expansion Areas in Brazil

Felipe Bonini da Luz *, Martha Lustosa Carvalho , Daniel Aquino de Borba , Bruna Emanuele Schiebelbein , Renato Paiva de Lima and Maurício Roberto Cherubin

*Corresponding author: boniniluz@usp.br

Supplementary Materials

Table S1. Adjustment parameters from van Genuchten (1980) for the average soil water retention curves.

Site	Use*	α ---hPa ⁻¹ ---	n -	θ_r -----m ³ m ⁻³ -----	θ_s	
0–10 cm						
Sandy soil	NV	0.048	2.033	0.038	0.610	
	PA	0.029	1.685	0.067	0.475	
	SCplant	0.033	1.911	0.042	0.561	
	SCratoon	0.025	2.325	0.054	0.496	
	10–20 cm					
	NV	0.031	2.050	0.049	0.504	
	PA	0.024	1.558	0.032	0.476	
	SCplant	0.027	1.820	0.067	0.521	
	SCratoon	0.019	3.585	0.050	0.442	
	20–30 cm					
	NV	0.023	3.032	0.042	0.557	
	PA	0.026	1.949	0.064	0.449	
SCplant	0.027	1.804	0.053	0.519		
SCratoon	0.023	1.874	0.065	0.451		
0–10 cm						
Clayey soil	NV	0.234	1.371	0.194	0.676	
	PA	0.217	1.337	0.191	0.591	
	SCplant	0.196	1.329	0.192	0.643	
	SCratoon	0.162	1.298	0.240	0.582	
	10–20 cm					
	NV	0.208	1.355	0.202	0.701	
	PA	0.218	1.280	0.184	0.584	
	SCplant	0.070	1.302	0.223	0.522	
	SCratoon	0.102	1.304	0.239	0.531	
	20–30 cm					
	NV	0.176	1.407	0.198	0.671	
	PA	0.210	1.296	0.201	0.551	
SCplant	0.073	1.336	0.239	0.568		
SCratoon	0.203	1.282	0.242	0.592		

* NV = native vegetation, PA = pasture, SCplant = sugarcane plant, SCratoon = sugarcane ratoon.