



**RIO18**  
21st World Congress  
of Soil Science

**21 WORLD CONGRESS OF SOIL SCIENCE**  
Sunday 12 – Friday 17 August 2018  
Rio de Janeiro, Brazil

Rio de Janeiro August | 12 - 17

## DIVISIONAL SYMPOSIUM – DIVISION 4

Friday (Aug, 17)		Room “Capri V”	
<b>C4.2.2</b>		<b>Soil quality and food security in the tropics</b>	
		<b>Convener:</b> Cassio Hamilton Abreu Júnior, Plant Nutrition Laboratory, Center for Nuclear Energy in Agriculture, University of São Paulo (CENA/USP), Piracicaba, São Paulo, Brazil	
		<b>Co-Convener:</b> Marcia Thais de Melo Carvalho, Brazilian Agricultural Research Corporation (Embrapa), National Research Center for Rice and Beans, Santo Antônio de Goiás, GO, Brazil	
Schedule	ID	Title	Presenter
13:30 – 13:40	--	Opening	Conveners
13:40 – 13:55	1421	Biochemical characterization of selenium toxicity symptoms in cowpea plants	Andre Rodrigues dos Reis
13:55 – 14:10	1337	Effect of different approaches of fertilizer recommendation on growth, yield and quality of soybean in a Vertisol.	K.K.Math
14:10 – 14:25	834	Effect of methods of Zinc and Fe nutrition on yield and quality of chickpea genotypes	Ganajaxi Math
14:25 – 14:40	394	How can we mitigate impact of climatic variability on crop production in the semiarid tropics of Africa?	Hitoshi Shinjo
14:40 – 14:55	1811	Impacts of Commercial Rhizobium Inoculants on Tropical Soybean (Glycine max) Varieties in the Guinea Savanna Agroecology of Northern Ghana	Edwin K. Akley
14:55 – 15:10	412	Promoting the 4R among smallholder farmers in the tropics: Successes, challenges and lessons learned	Bucaro, Andres
15:10 – 15:25	1678	Relationship between Cadmium levels in soil and beans in cacao production systems of the Colombian central Andean region	Martha C. Henao
15:25 – 15:40	1582	Soil Health for Climate Change Resilience and Food Security in the Central American Dry Corridor	Marie-Soleil Turmel
15:40 – 15:55	--	Closing	Conveners



**Brazilian Soil Science Society**



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