

Table of contents

	Foreword	IV
	Preface	VII
Chapter 1	Soils as a foundation for plant, animal and human health Bal Ram Singh	1
Chapter 2	History of soils in relation to animal and human health Eric C. Brevik and Lily Pereg.	8
Chapter 3	The Soil-Animal-Human Health Nexus Kathi Kemper, J. Lakritz and Rattan Lal	16
Chapter 4	Impact of soil on human health Adeline Louie and Rattan Lal	21
Chapter 5	Role of soils for satisfying global demands as defined by the Sustainable Development Goals Winfried E.H. Blum	30
Chapter 6	Soil physicochemical properties impacting upon animal and human health Peter M. Kopittke, Peng Wang and Ram C. Dalal	34
Chapter 7	Soil physical compaction and erosion as a threat to food production and human health Rainer Horn, Heiner Fleige, Iris Zimmermann and X. Peng	42
Chapter 8	Soil microbial processes in relation to plant, animal and human health E. Semu, H. Tindwa and G. Misinzo.	49
Chapter 9	Macronutrients in soils and plants, and their impacts on animal and human health Alan J. Franzluebbers and Andrew N. Sharpley	58
Chapter 10	Micronutrients in soils and plants and their impact on animal and human health R.P. Narwal., R.S. Malik and H. K. Yadav	64
Chapter 11	Iron deficiency in soils and plants and its implication for global human health Ross M. Welch	72
Chapter 12	Zinc deficiency in soils and plants and its implications for global human health R.S. Malik, R.P. Narwal, H.K. Yadav and Dheeraj Panghaa	77
Chapter 13	Selenium deficiency in regional soils affecting animal and human health in Balkan and other European countries Maja Manojlović and Zdenko Lončarić	87

Chapter 14 Mineral balances in animal nutrition	
Tore Sivertsen and Aksel Bernhoft	99
Chapter 15 Challenges in predicting needs for mineral supplementation in grazing livestock	
N.F. Suttle	105
Chapter 16 Soil management and fertilizer practices affecting crop production and human health	
Rodrigo C. da Silva, Fien Degryse, Roslyn Baird and Mike J. McLaughlin . .	111
Chapter 17 Biofortification of food and fodder crops with zinc and iron for improved human and animal health	
Yashbir Singh Shivay and Vijay Pooniya	122
Chapter 18 Biofortification of food and fodder crops with selenium for improved animal and human health	
Maria J. Poblaciones	133
Chapter 19 Cadmium transfer from soil to plants and its potential risk to human health	
Peng Wang, Peter M. Kopittke, Steve P. McGrath and Fang-Jie Zhao	138
Chapter 20 Arsenic in ground waters, soils, and food crops in Bangladesh and India seriously affects human health	
M.T.A. Chowdhury and S.M. Imamul Huq	148
Chapter 21 Impact of climate change on soil carbon storage	
Ram C. Dalal, Peter M Kopittke, and Neal W Menzies	156