

CONTENTS

- 131 **Preface**
Makiko Watanabe and Masayuki Kawahigashi
- 132 Issues related to classification of garden soils from the urban area of Toruń, Poland
Przemysław Charzyński, Renata Bednarek, Patrycja Hudańska and Marcin Świtoniak
- 138 Technosols in the World Reference Base for Soil Resources – history and definitions
Peter Schad
- 145 Degradation of the urban ecosystem function due to soil sealing: involvement in the heat island phenomenon and hydrologic cycle in the Tokyo metropolitan area
Tomoyoshi Murata and Nobuo Kawai
- 156 Application of soil amendments to contaminated soils for heavy metal immobilization and improved soil quality—a critical review
Chaw Su Lwin, Byoung-Hwan Seo, Hyun-Uk Kim, Gary Owens and Kwon-Rae Kim
- 168 Effects of row deep tillage for the growth base formed by piling up soil in damp lowlands behind coastal sand dunes to construct coastal disaster prevention forest belts on the Kujukuri coastline, Japan
Kenji Ono, Akane Komoriya, Ryuichi Tachibana, Akihiro Imaya, Satoru Suzuki, Hironori Noguchi, Kyotaro Noguchi and Hiroaki Hagino
- 181 Water retention characteristics of coarse porous materials to construct purpose-designed plant growing media
Eleonora Flores-Ramírez, Stefan Abel and Thomas Nehls
- 190 Human-altered and human-transported (HAHT) soils in the U.S. soil classification system
John M. Galbraith
- Rice GHG special section paper**
- 200 Contribution of fallow periods between rice crops to seasonal GHG emissions: effect of water and tillage management
Bjoern Ole Sander, Marianne Samson, Pearl B. Sanchez, Katherine P. Valencia, Evyvan A. M. Demafelix and Roland J. Buresh
- Regular papers**
- Soil chemistry and soil mineralogy**
- 210 Arsenic immobilization in anaerobic soils by the application of by-product iron materials obtained from the casting industry
Aomi Suda, Noriko Yamaguchi, Hayato Taniguchi and Tomoyuki Makino
- 218 Characteristics of phosphorus fractions in the soils derived from sedimentary and serpentinite rocks in lowland tropical rain forests, Borneo
Daiki Yokoyama, Taiki Mori, Rota Wagai, Syuntaro Hiradate and Kanehiro Kitayama
- Soil biology**
- 222 Effects of co-inoculation of *Bradyrhizobium japonicum* SAY3-7 and *Streptomyces griseoflavus* P4 on plant growth, nodulation, nitrogen fixation, nutrient uptake, and yield of soybean in a field condition
Aung Zaw Htwe, Seinn Moh Moh, Kyi Moe and Takeo Yamakawa
- 230 Are all three components of conservation agriculture necessary for soil conservation in the Sudan Savanna?
Kenta Ikazaki, Fujio Nagumo, Saïdou Simporé and Albert Barro
- Plant nutrition**
- 238 Effects of arbuscular mycorrhizal fungi on the growth of two turfgrasses grown under greenhouse conditions
Khalid Elhindi, Nasser Al-Suhaibani, Salah El-Hendawy and Fahad Al-Mana
- Fertilizers and soil amendments**
- 244 Impacts of natural polymer derivative neutral polysaccharide Jag S and cationic hydroxypropyl polysaccharide Jag C162 on rainfall infiltration on an experimental loess hillslope
Li Yuan-Yuan, Wang Zhan-Li, Wu Bing, Liu Jun-E and Jiao Nian
- 253 Exploring patterns of *Camellia* seed cake application in relation to plant growth, soil nematodes and microbial biomass
Xiujian Yang, Chao Xue, Lanxi Su, Yifan Cao, Hongmei Li, Kang Wang, Rong Li and Qirong Shen
- Environment**
- 265 Potassium behavior and clay mineral composition in the soil with low effectiveness of potassium application
Katashi Kubo, Takashi Hirayama, Shigeto Fujimura, Tetsuya Eguchi, Naoto Nihei, Shoichiro Hamamoto, Megumi Takeuchi, Takashi Saito, Takeshi Ota and Takuro Shinano
- 272 Abstracts of *Nippon Dojo-Hiryogaku Zasshi*, Vol. 88 No. 4
- 274 Note from Editorial office
- 275 Corrigendum