

CONTENTS

Preface

- 277 Preface to special section 'Frontline in the rhizosphere research involved in phosphorus: for efficient use of unavailable P in soils (Rhizo-P)'
Jun Wasaki
- 278 Identification of genomic regions associated with low phosphorus tolerance in japonica rice (*Oryza sativa* L.) by QTL-Seq
Sho Nishida, D. M. S. B. Dissanayaka, Soichiro Honda, Yoshiko Tateishi, Masaru Chuba, Hayato Maruyama, Keitaro Tawaraya and Jun Wasaki
- 282 Organ-specific allocation pattern of acquired phosphorus and dry matter in two rice genotypes with contrasting tolerance to phosphorus deficiency
D. M. S. B. Dissanayaka, Sho Nishida, Keitaro Tawaraya and Jun Wasaki
- 291 Fractionation of phosphorus in soils with different geological and soil physicochemical properties in southern Tanzania
Tomohiro Nishigaki, Soh Sugihara, Kazuki Kobayashi, Yohey Hashimoto, Method Kilasara, Haruo Tanaka, Tetsuhiro Watanabe and Shinya Funakawa
- 300 Incorporation of fallow weed increases phosphorus availability in a farmer's organic rice fields on allophanic Andosol in eastern Japan
Ryohei Sakuraoka, Kazunobu Toriyama, Kazuhiko Kobayashi, Susumu Yamada, Hiroyuki Kamioka and Seiji Mori
- 306 Inoculum effect of arbuscular mycorrhizal fungi on soybeans grown in long-term bare-fallowed field with low phosphate availability
Masaki Hayashi, Rieko Niwa, Yasufumi Urashima, Yuko Suga, Shusei Sato, Hideki Hirakawa, Shigenobu Yoshida, Tatsuhiro Ezawa and Toshihiko Karasawa
- 312 Metabolite profiling of shoot extract, root extract, and root exudate of rice under nitrogen and phosphorus deficiency
Keitaro Tawaraya, Ryota Horie, Tadao Wagatsuma, Kazuki Saito and Akira Oikawa

Regular papers

Soil physics

- 323 Effect of phenolic acids on the formation and stabilization of soil aggregates
Seiko Yoshikawa, Yasufumi Kuroda, Hideto Ueno, Masako Kajiura and Noriharu Ae

Soil biology

- 335 Molecular identification of arbuscular mycorrhizal fungal spores associated to the rhizosphere of *Retama raetam* in Tunisia
Mahdhi Mosbah, De Lajudie Philippe and Mars Mohamed

Plant nutrition

- 342 Effect of excess zinc and arbuscular mycorrhizal fungus on bioproduction and trace element nutrition of Tomato (*Solanum lycopersicum* L. cv. Micro-Tom)
Young Bassej Ibiang, Haruki Innami and Kazunori Sakamoto

- 352 Relationship between Rubisco activase and Rubisco contents in transgenic rice plants with overproduced or decreased Rubisco content
Mao Suganami, Yuji Suzuki, Tomonori Sato and Amane Makino
- 360 Effects of drought stress on the seedling growth, development, and metabolic activity in different cultivars of canola
Maryam Rezayian, Vahid Niknam and Hassan Ebrahimzadeh
- 370 Physiological and transcriptomic analysis of responses to different levels of iron excess stress in various rice tissues
May Sann Aung, Hiroshi Masuda, Takanori Kobayashi and Naoko K. Nishizawa

Soil genesis, classification and survey

- 386 Effects of seasonal rainfall and water table movement on the soil solution composition of tropical peatland
Setiari Marwanto, Tetsuhiro Watanabe, Wahyu Iskandar, Supiandi Sabiham and Shinya Funakawa

Soil fertility

- 396 Promotive effect of soil solution on germination of *Monochoria vaginalis* under paddy conditions
Takuhito Nozoe, Junko Tazawa, Akira Uchino and Shigenori Miura
- 406 Effects of different application methods of fertilizer and manure on soil chemical properties and yield in whole crop rice cultivation
Borin Khem, Yasumaru Hirai, Takeo Yamakawa, Yuki Mori, Eiji Inoue, Takashi Okayasu and Muneshi Mitsuoka

Fertilizers and soil amendments

- 415 Phosphorus and potassium availability from cattle manure ash in relation to their extractability and grass tetany hazard
Quoc Thinh Tran, Morihiro Maeda, Kazuyuki Oshita, Masaki Takaoka and Kuniyuki Saito
- 423 Effects of concentrated application of soil conditioners on soil-air permeability and absorption of nitrogen by young peach trees
Yuansong Xiao, Yan Peng, Futian Peng, Yafei Zhang, Wen Yu, Maoxiang Sun and Xiaolan Gao

Environment

- 433 Effect of air temperature after heading of rice on the arsenic concentration of grain
Tomohito Arao, Tomoyuki Makino, Akira Kawasaki, Ikuko Akahane and Nobuharu Kiho

Abstract

- 438 Abstracts of Nippon Dojo-Hiryogaku Zasshi, Vol. 89 (2018), No. 1
- 441 Abstracts of Nippon Dojo-Hiryogaku Zasshi, Vol. 88 (2017), No. 6