

CONTENTS

Soil chemistry and soil mineralogy

- 321 Ball milling pretreatment affects the content of fixed ammonium in soils in response to the content of exchangeable ammonium
Kaori Matsuoka, Naoki Moritsuka and Shinya Funakawa

Plant nutrition

- 329 Molecular basis of the nitrogen response in plants
Yoshiaki Ueda, Mineko Konishi and Shuichi Yanagisawa
- 342 Autophagy is induced under Zn limitation and contributes to Zn-limited stress tolerance in *Arabidopsis thaliana*
Masatake Eguchi, Kazuhiko Kimura, Amane Makino and Hiroyuki Ishida

- 351 Right time of phosphorus and zinc application to maize depends on nutrient–nutrient and nutrient–inoculum interactions
Shahid Hussain, Muhammad Baqir Hussain, Aasim Gulzar, Muhammad Zafar-ul-Hye, Muhammad Aon, Muhammad Qaswar and Rizwan Yaseen

Soil fertility

- 357 Soil morphological and chemical properties in homegardens on sandy beach ridges along the east coast of Peninsular Malaysia
Khairul Hafiz Mohd Yusoff, Arifin Abdu, Katsutoshi Sakurai, Sota Tanaka and Yumei Kang

Fertilizers and soil amendments

- 369 Phosphorus release from cattle manure ash as soil amendment in laboratory-scale tests
Quoc Thinh Tran, Morihiro Maeda, Kazuyuki Oshita and Masaki Takaoka
- 377 Carbon and nitrogen forms in soil organic matter influenced by incorporated wheat and corn residues
Xi Chen, Alice Mao, Yajie Zhang, Ligan Zhang, Jiang Chang, Hongjian Gao and Michael L Thompson

Environment

- 388 Breeding of a practical rice line 'TJTT8' for phytoextraction of cadmium contamination in paddy fields
Tadashi Abe, Masashi Ito, Ryuichi Takahashi, Toshimitsu Honma, Naoki Sekiya, Kensuke Shirao, Masato Kuramata, Masaharu Murakami and Satoru Ishikawa
- 396 Tillage, fertilizer type, and plant residue input impacts on soil carbon sequestration rates on a Japanese Andosol
Nobuhisa Koga
- 405 Effects of inhibitors and biochar on nitrous oxide emissions, nitrate leaching, and plant nitrogen uptake from urine patches of grazing animals on grasslands: a meta-analysis
Yanjiang Cai and Hiroko Akiyama

Abstracts

- 415 Abstracts of Nippon Dojo-Hiryogaku Zasshi