

Soil Use **S18** and Management

An International Journal

Editor: Michael J. Goss

Deputy Editors: Amarilis de Varennes and Fiona Nicholson

Volume 31 Number 1

March 2015

ISSN 0266-0032 (Print)

ISSN 1475-2743 (Online)



WILEY
Blackwell



BRITISH
SOCIETY
OF SOIL
SCIENCE

Published for the British Society of
Soil Science by Wiley-Blackwell



Soil Use and Management

Volume 31 Number 1

March 2015

ISSN 0266-0032 (Print)

ISSN 1475-2743 (Online)

Soil nutrient management

- 1 M. A. ALBURQUERQUE, J. DIECKOW, A. SORDI, J. T. PIVA, C. BAYER, R. MOLIN, M. PERGHER & P. J. RIBEIRO-JUNIOR
Carbon and nitrogen in a Ferralsol under zero-tillage rotations based on cover, cash or hay crops
- 10 T. RAKOTOSON, L. SIX, M. P. RAZAFIMANANTSOA, L. RABEHARISOA & E. SMOLDERS
Effects of organic matter addition on phosphorus availability to flooded and nonflooded rice in a P-deficient tropical soil: a greenhouse study
- 19 H. F. ZHENG, L. D. CHEN, X. Y. YU, X. F. ZHAO, Y. MA & Z. B. REN
Phosphorus control as an effective strategy to adapt soybean to drought at the reproductive stage: evidence from field experiments across northeast China

Management of soil organic matter

- 29 B. P. MARCHANT, E. J. VILLANNEAU, D. ARROUAYS, N. P. A. SABY & B. G. RAWLINS
Quantifying and mapping topsoil inorganic carbon concentrations and stocks: approaches tested in France
- 39 G. D. CLAY, F. WORRALL & N. J. AEBISCHER
Carbon stocks and carbon fluxes from a 10-year prescribed burning chronosequence on a UK blanket peat
- 52 B. KOLLAH, G. DUBEY, P. PARASAI, J. K. SAHA, S. GANGIL & S. R. MOHANTY
Interactive effect of biochar size and organic amendments on methane consumption in a tropical vertisol

Environmental aspects of land management

- 60 T. BATEY
The installation of underground pipelines: effects on soil properties
- 67 M. PEACOCK, T. G. JONES, B. AIREY, A. JOHNCOCK, C. D. EVANS, I. LEBRON, N. FENNER & C. FREEMAN
The effect of peatland drainage and rewetting (ditch blocking) on extracellular enzyme activities and water chemistry
- 77 G. D. CLAY & F. WORRALL
Estimating the oxidative ratio of UK peats and agricultural soils
- 89 A. N. JUAN, L. I. U. QIANJIN & W. U. YUANZHI
Optimization of the contour ridge system for controlling nitrogen and phosphorus losses under seepage condition
- 98 M. HUANG, T. LIANG & L. WANG
Nitrous oxide emissions in a winter wheat – summer maize double cropping system under different tillage and fertilizer management

Soil physico-Chemical properties and their management

- 106 A. INAL, A. GUNES, O. SAHIN, M. B. TASKIN & E. C. KAYA
Impacts of biochar and processed poultry manure, applied to a calcareous soil, on the growth of bean and maize
- 114 B. RUTKOWSKA, W. SZULC, M. HOCH & E. SPYCHAJ-FABISIAK
Forms of Al in soil and soil solution in a long-term fertilizer application experiment
- 121 D. RIVERA, M. SANDOVAL & A. GODOY
Exploring soil databases: a self-organizing map approach
- 132 S. GUT, A. CHERVET, M. STETTLER, P. WEISSKOPF, W. G. STURNY, M. LAMANDÉ, P. SCHJØNNING & T. KELLER
Seasonal dynamics in wheel load-carrying capacity of a loam soil in the Swiss Plateau
- 142 Z. ZOLFAGHARI, M. R. MOSADDEGHI & S. AYOUBI
ANN-based pedotransfer and soil spatial prediction functions for predicting Atterberg consistency limits and indices from easily available properties at the watershed scale in western Iran

Land management and soil organisms

- 155 L. ALMONACID, A. FUENTES, J. ORTIZ, C. SALAS, I. GARCIA-ROMERA, J. OCAMPO & C. ARRIAGADA
Effect of mixing soil saprophytic fungi with organic residues on the response of *Solanum lycopersicum* to arbuscular mycorrhizal fungi
- 165 A. E. FERRARI, S. RAVNSKOV, J. LARSEN, T. TØNNERSEN, R. A. MARONNA & L. G. WALL
Crop rotation and seasonal effects on fatty acid profiles of neutral and phospholipids extracted from no-till agricultural soils

Book Review

- 176 W. TOWERS
Soils and Land Use in Central Wales



Main picture: Planting seedlings of Chinese cabbage plugs in the granite belt on the border of Queensland and New South Wales, Australia. Photo by Michael Goss.

Lower left: Forage maize harvest on a light sandy loam soil in Norfolk, UK. Photo by Milly Bowden (ADAS).

Lower right: Harvesting in a super-intensive olive grove in the Alentejo region of Portugal. Photo by Amarilis de Varennes.