



Volume 49, September 2011

ISSN 0929-1393

# Applied Soil Ecology



# Applied Soil Ecology

VOL. 49

CONTENTS

SEPTEMBER 2011

(Abstracted/Indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.

## Viewpoint

Assessment of soil quality using microbial properties and attributes of ecological relevance

C. Garbisu, I. Alkorta and L. Epelde (Spain) ..... 1

## Articles

Lack of home-field advantage in the decomposition of leaf litter in the Atlantic Rainforest of Brazil

U.C. Gleßelmann, K.G. Martins, M. Brändle, M. Schädler, R. Marques and R. Brandl (Germany, Brazil) ..... 5

Use of biostimulants on soil restoration: Effects on soil biochemical properties and microbial community

M. Tejada, C. Benítez, I. Gómez and J. Parrado (Spain) ..... 11

Pathogenic bacteria and mineral N in soils following the land spreading of biogas digestates and fresh manure

M. Goberna, S.M. Podmirseg, S. Waldhuber, B.A. Knapp, C. García and H. Insam (Austria, Spain) ..... 18

Deposition of sand over a cyanobacterial soil crust increases nitrogen bioavailability in a semi-arid woodland

W.J. Williams and D.J. Eldridge (Australia) ..... 26

Effects of cattle-lagoon slurry on a soil microbial community can be observed until depths of 50 m

G. Hermann, L.S. Shore and Y. Steinberger (Israel) ..... 32

Effect of banana crop mixtures on the plant-feeding nematode community

P. Quénehervé, V. Barrière, F. Salmon, F. Houdin, R. Achard, J.-C. Gertrude, S. Marie-Luce, C. Chabrier, P.-F. Duyck and P. Tixier (France) ..... 40

Effects of soil management on structure and activity of denitrifying bacterial communities

R. Pastorelli, S. Landi, D. Trabelsi, R. Piccolo, A. Mengoni, M. Bazzicalupo and M. Pagliai (Italy) ..... 46

Effects of four organic amendments on banana parasitic nematodes and soil nematode communities

P. Tabarant, C. Villenave, J.-M. Risede, J. Roger-Estrade, L. Thuries and M. Dorel (France) ..... 59

Inhibition of the germination and growth of *Phymatotrichopsis omnivora* (cotton root rot) by oilseed meals and isothiocyanates

P. Hu, A.S. Wang, A.S. Engledow, E.B. Hollister, K.L. Rothlisberger, J.E. Matocha, D.A. Zuberer, T.L. Provin, F.M. Hons and T.J. Gentry (USA) ..... 68

Chemical structure of humic acids in biosolids-amended soils as revealed by NMR spectroscopy

C.Y. Chiu and G. Tian (Taiwan, USA) ..... 76

Plant-associated nematode communities in West-palaearctic coastal foredunes may relate to climate and sediment origins

T. Mateille, J. Tavoillot, B. Martiny, M. Fargette, E. Chapuis, M. Baudouin, E. Dmowska and S. Bouamer (France, Poland) ..... 81

Effects of crumb rubber waste as a soil conditioner on the nematode assemblage in a turfgrass soil

S. Zhao, T. He and L. Duo (China) ..... 94

(Contents continued on page 272)

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsol>



0929-1393(201109)49:c;1-3

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091

# Applied Soil Ecology

VOL. 50

CONTENTS

OCTOBER 2011

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.

## Review

Earthworms as colonizers of natural and cultivated soil environments

H. Eijsackers (The Netherlands, South Africa) ..... 1

## Articles

Diversity of rhizobia in soybean [*Glycine max* (Vinton)] nodules varies under organic and conventional management

J.M. Grossman, M.E. Schipanski, T. Sooksanguan, S. Seehaver and L.E. Drinkwater (USA, Thailand) ..... 14

Application of biostimulants in benzo(a)pyrene polluted soils: Short-time effects on soil biochemical properties

M. Tejada, C. Benítez and J. Parrado (Spain) ..... 21

Resistance and resilience of the soil microbial biomass to severe drought in semiarid soils: The importance of organic amendments

S. Hueso, T. Hernández and C. García (Spain) ..... 27

Organic viticulture and soil quality: A long-term study in Southern France

P. Coll, E. Le Cadre, E. Blanchart, P. Hinsinger and C. Villenave (France) ..... 37

Microbial mineralization of biochar and wheat straw mixture in soil: A short-term study

C. Zavalloni, G. Alberti, S. Biasiol, G.D. Vedove, F. Fornasier, J. Liu and A. Peressotti (Italy) ..... 45

Assessing effects of earthworm cast on methanotrophic community in a soil biocover by concurrent use of microarray and quantitative real-time PCR

T.G. Kim, K.-E. Moon, E.-H. Lee, S.-A. Choi and K.-S. Cho (Republic of Korea) ..... 52

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsoil>



0929-1393 (201110) 50:C;1-Z

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091



# Applied Soil Ecology

VOL. 51

CONTENTS

NOVEMBER 2011

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.

Effects of earthworm activity on humus composition and humic acid characteristics of soil in a maize residue amended rice–wheat rotation agroecosystem J. Zhang, F. Hu, H. Li, Q. Gao, X. Song, X. Ke and L. Wang (China) .....	1
Enhancing predation of a subterranean insect pest: A conservation benefit of winter vegetation in agroecosystems J.G. Lundgren and J.K. Fergen (USA) .....	9
Effects of heavy metal contamination from an abandoned mine on nematode community structure as an indicator of soil ecosystem health B.-Y. Park, J.-K. Lee, H.-M. Ro and Y.H. Kim (Republic of Korea) .....	17
The effect of soil heterogeneity on the spatial distribution of <i>Heterodera schachtii</i> within sugar beet fields C. Hbirkou, G. Welp, K. Rehbein, C. Hillnhütter, M. Daub, M.A. Oliver and S. Pätzold (Germany, UK) .....	25
The importance of mycelial connection at the soil–litter interface for nutrient translocation, enzyme activity and litter decomposition N.I. Chigineva, A.V. Aleksandrova, S. Marhan, E. Kandeler and A.V. Tiunov (Russia, Germany) .....	35
Microbial activity in soils under fast-growing Paulownia ( <i>Paulownia elongata x fortunei</i> ) plantations in Mediterranean areas M.E. Lucas-Borja, C. Wic-Baena, J.L. Moreno, T. Dadi, C. García and M. Andrés-Abellán (Spain) .....	42
Effects of maize inoculation with <i>Fusarium verticillioides</i> and with two bacterial biocontrol agents on seedlings growth and antioxidative enzymatic activities P. Pereira, S.G. Ibáñez, E. Agostini and M. Etcheverry (Argentina) .....	52
Harvester ant ( <i>Messor barbarus</i> (L.)) density as related to soil properties, topography and management in semi-arid cereals B. Baraibar, J. Torra and P.R. Westerman (Spain, Germany) .....	60
Long-term land use effects on soil microbial community structure and function A. Bissett, A.E. Richardson, G. Baker and P.H. Thrall (Australia) .....	66
Soil microbial biomass nitrogen and $\beta$ -glucosaminidase activity response to surface compaction and poultry-litter application in a claypan soil P. Pengthamkeerati, P.P. Motavalli and R.J. Kremer (Thailand, USA) .....	79
Metabolic capacities of microorganisms from a long-term bare fallow B. Guenet, S. Juarez, G. Bardoux, V. Pouteau, N. Cheviron, C. Marraud, L. Abbadie and C. Chenu (France) .....	87
Seasonal changes in nitrogen availability, and root and microbial uptake of $^{15}\text{N}^{13}\text{C}_9$ -phenylalanine and $^{15}\text{N}$ -ammonium <i>in situ</i> at a temperate heath L.C. Andresen, A. Michelsen, S. Jonasson and L. Ström (Denmark, Sweden) .....	94
Biodegradation of 4-hydroxybenzoic acid by <i>Phomopsis liquidambari</i> Y. Chen, Y. Peng, C.-C. Dai and Q. Ju (China) .....	102

(Contents continued on page 1)

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apssoil>



0929-1393(201111)51:C;1-V

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect 05091



# Applied Soil Ecology

VOL. 52

CONTENTS

JANUARY 2012

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.

How earthworm activities affect banana plant response to nematodes parasitism G. Loranger-Merciris, Y.-M. Cabidoche, B. Deloné, P. Quénehervé and H. Ozier-Lafontaine (France) .....	1
The mosaic of habitats in the high-altitude Brazilian rupestrian fields is a hotspot for arbuscular mycorrhizal fungi F. de Carvalho, F.A. de Souza, R. Carrenho, F.M.d.S. Moreira, E.d.C. Jesus and G.W. Fernandes (Brazil) .....	9
Spatial distribution of <i>Metarhizium</i> clade 1 in agricultural landscapes with arable land and different semi-natural habitats S. Schneider, F. Widmer, K. Jacot, R. Kölliker and J. Enkerli (Switzerland) .....	20
Compost, rapeseed rotation, and biocontrol agents significantly impact soil microbial communities in organic and conventional potato production systems E. Bernard, R.P. Larkin, S. Tavantzis, M.S. Erich, A. Alyokhin, G. Sewell, A. Lannan and S.D. Gross (USA) .....	29
Soil organic matter in density fractions as related to vegetation changes along an altitude gradient in the Wuyi Mountains, south-eastern China X. Bu, H. Ruan, L. Wang, W. Ma, J. Ding and X. Yu (PR China) .....	42
Enzyme activities and metabolic profiles of soil microorganisms at KILN sites in <i>Quercus</i> spp. temperate forests of central Mexico B.E. Gómez-Luna, G.M.d.I.L. Ruiz-Aguilar, G. Vázquez-Marrufo, L. Dendooven and V. Olalde-Portugal (Mexico) .....	48
Plant root exudates impact the hydrocarbon degradation potential of a weathered-hydrocarbon contaminated soil L.A. Phillips, C.W. Greer, R.E. Farrell and J.J. Germida (Canada) .....	56

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsol>



0929-1393(201201)52:1-0

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect 05091



# Applied Soil Ecology

VOL 53

CONTENTS

FEBRUARY 2012

(Abstracted/indexed in: *Biobase*; *BIOSIS*; *CAB International "Soils and Fertilizers"*; *Ecological Abstracts*; *EMBIology*; *Geobase*; *Thomson Scientific Alerting Services*; *Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences)*; *Thomson Scientific Citation Index*; *Thomson Scientific SciSearch*). Also covered in the abstract and citation database *Scopus*®. Full text available on *ScienceDirect*®.

Dynamics of bacterial communities in relation to soil aggregate formation during the decomposition of <sup>13</sup> C-labelled rice straw A. Blaud, T.Z. Lerch, T. Chevallier, N. Nunan, C. Chenu and A. Brauman (France).....	1
Seasonal dynamics of nutrients and bacterial communities in unvegetated alpine glacier forefields A. Lazzaro, R. Brankatschk and J. Zeyer (Switzerland).....	10
Relationships among persistence of <i>Bacillus thuringiensis</i> and Cowpea trypsin inhibitor proteins, microbial properties and enzymatic activities in rhizosphere soil after repeated cultivation with transgenic cotton Z.H. Chen, L.J. Chen and Z.J. Wu (China).....	23
Impact of land application of cranberry processing residuals, leaves and biosolids pellets on a sandy loam soil C. San Miguel, D. Giménez, U. Krogmann and S.W. Yoon (USA, Republic of Korea).....	31
Understanding the relationship between adult and larval <i>Agriotes</i> distributions: The effect of sampling method, species identification and abiotic variables C.M. Benefer, M.E. Knight, J.S. Ellis, H. Hicks and R.P. Blackshaw (UK).....	39
Soil labile carbon and nitrogen pools and microbial metabolic diversity under winter crops in an arid environment X. Zhou, H. Wu, E. Koetz, Z. Xu and C. Chen (Australia).....	49
Landsnail eggs bioassays: A new tool to assess embryotoxicity of contaminants in the solid, liquid or gaseous phase of soil C. Druart, R. Scheifler, M. Millet and A. de Vaufléury (France).....	56
Engineering heterologous iron siderophore complex utilization in rhizobia: Effect on growth of peanut and pigeon pea plants K. Arif, G. Archana and A.J. Desai (India).....	65
Genotypic analysis of isolated peanut-nodulating rhizobial strains reveals differences among populations obtained from soils with different cropping histories F. Nieves, P. Bogino, N. Nocelli and W. Giordano (Argentina).....	74
Earthworm populations in a traditional village landscape in Central Himalaya, India T. Bhadauria, P. Kumar, R. Kumar, R.K. Maikhuri, K.S. Rao and K.G. Saxena (India).....	83
A better water status in wheat seedlings induced by <i>Azospirillum</i> under osmotic stress is related to morphological changes in xylem vessels of the coleoptile M.A. Pereyra, P. García, M.N. Colabelli, C.A. Barassi and C.M. Creus (Argentina).....	94
Vulnerability of soil invertebrate communities to the influences of livestock in three grasslands N.L. Schon, A.D. Mackay and M.A. Minor (New Zealand).....	98
Tree girdling affects the soil microbial community by modifying resource availability in two subtropical plantations D. Chen, L. Zhou, J. Wu, J. Hsu, Y. Lin and S. Fu (China, USA).....	108

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsoil>



0929-1393(201202)53:1-X

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091



# Applied Soil Ecology

VOL 54

CONTENTS

MARCH 2012

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.

Comparison of different aggregate stability approaches for loamy sand soils S. Deviren Saygin, W.M. Cornelis, G. Erpul and D. Gabriels (Turkey, Belgium) .....	1
Tree girdling effect on bacterial substrate utilization pattern depending on stand age and soil microclimate in <i>Eucalyptus</i> plantations Z. Liu, J. Wu, L. Zhou, Y. Lin and S. Fu (China) .....	7
Linking invertebrate communities to decomposition rate and nitrogen availability in pine forest soils D.A. Neher, T.R. Weicht and M.E. Barbercheck (USA).....	14
Soil microbial communities under model biofuel cropping systems in southern Wisconsin, USA: Impact of crop species and soil properties C. Liang, E. da C. Jesus, D.S. Duncan, R.D. Jackson, J.M. Tiedje and T.C. Balser (USA).....	24
Changes in non-symbiotic nitrogen-fixing bacteria inhabiting rhizosphere soils of an invasive plant <i>Ageratina adenophora</i> C.-W. Xu, M.-Z. Yang, Y.-J. Chen, L.-M. Chen, D.-Z. Zhang, L. Mei, Y.-T. Shi and H.-B. Zhang (PR China) .....	32
Genetically modified Bt maize lines containing <i>cry3Bb1</i> , <i>cry1A105</i> or <i>cry1Ab2</i> do not affect the structure and functioning of root-associated endophyte communities M. Prischl, E. Hackl, M. Pastar, S. Pfeiffer and A. Sessitsch (Austria).....	39
<i>Orthonychiurus pseudostachianus</i> (collembola) as a toxicity test organism and selection of an ecotoxicological test battery to assess soil quality L. Santorufo, R. Carotenuto, A. Rocco, F.D.L. Picione and G. Maisto (Italy).....	49
Allocation of carbon to mycorrhiza in the grasses <i>Koeleria glauca</i> and <i>Corynephorus canescens</i> in sandy grasslands L.-M. Mårtensson, T.K. Schnoor and P.A. Olsson (Sweden) .....	55

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsoil>



0929-1393(201203)54:1-T

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091



# Applied Soil Ecology

VOL. 55

CONTENTS

APRIL 2012

(Abstracted/Indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.

Bacterial polycyclic aromatic hydrocarbon ring-hydroxylating dioxygenases (PAH-RHD) encoding genes in different soils from King George Bay, Antarctic Peninsula D. Jurelevicius, V.M. Alvarez, R. Peixoto, A.S. Rosado and L. Seldin (Brazil) .....	1
Active dispersal of oribatid mites into young soils R. Lehmitz, D. Russell, K. Hohberg, A. Christian and W.E.R. Xylander (Germany) .....	10
Glyphosate affects the rhizobacterial communities in glyphosate-tolerant cotton J. Barriuso and R.P. Mellado (Spain).....	20
Biodegradability of soy biodiesel in microcosm experiments using soil from the Atlantic Rain Forest G.S. Silva, E.L.S. Marques, J.C.T. Dias, I.P. Lobo, E. Gross, M. Brendel, R.S. da Cruz and R.P. Rezende (Brazil) .....	27
The impact of coccidiostats monensin and lasalocid on Cd and Pb uptake in the isopod <i>Porcellio scaber</i> P. Zidar and S. Žižek (Slovenia).....	36
Diversity of plant growth-promoting rhizobacteria communities associated with the stages of canola growth R. Farina, A. Beneduzi, A. Ambrosini, S. B. de Campos, B. B. Lisboa, V. Wendisch, L. K. Vargas, L. M. P. Passaglia .....	44
History of land-use intensity can modify the relationship between functional complexity of the soil fauna and soil ecosystem services – A microcosm study M. Liri, M. Häsä, J. Haimi and H. Setälä (Finland).....	53

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsoil>



0929-1393 (201204) 55: 1-P

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091





# Applied Soil Ecology

VOL. 56

CONTENTS

MAY 2012

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database SciVerse Scopus®. Full text available on SciVerse ScienceDirect®.

Art meets science: soil tripmarks	
H. Insam, S. Deng, C.A.M. van Gestel and R. Dick.....	iv
Mongolian pine plantations enhance soil physico-chemical properties and carbon and nitrogen capacities in semi-arid degraded sandy land in China	
Y. Li, T. Awada, X. Zhou, W. Shang, Y. Chen, X. Zuo, S. Wang, X. Liu and J. Feng (China, USA).....	1
Effects of cadmium on the fitness of, and interactions between, two bacterivorous nematode species	
J.G. Martinez, G. dos Santos, S. Derycke and T. Moens (Brazil, Philippines, Belgium).....	10
Heat stress and N fertilization affect soil microbial and enzyme activities in the creeping bentgrass ( <i>Agrostis Stolonifera</i> L.) rhizosphere	
E.A. Dell, D.S. Carley, T. Ruffy and W. Shi (USA).....	19
Analysis of soil microbial community level physiological profiles in native and post-mining rehabilitation forest: Which substrates discriminate?	
N.C. Banning, B.M. Lalor, W.R. Cookson, A.H. Grigg and D.V. Murphy (Australia).....	27
Life-history traits predict recovery patterns in Collembola species after fire: A 10 year study	
A. Malmström (Sweden).....	35
Soil macrofauna-mediated impacts of plant species composition on soil functioning in Amazonian pastures	
E. Velásquez, S.J. Fonte, S. Barot, M. Grimaldi, T. Desjardins and P. Lavelle (Colombia, France).....	43
Remediating abilities of different plant species grown in diesel-fuel-contaminated leached chernozem	
A.Y. Muratova, S.N. Golubev, E.V. Dubrovskaya, N.N. Pozdnyakova, L.V. Panchenko, E.V. Pleshakova, M.P. Chernyshova and O.V. Turkovskaya (Russia).....	51
Biological control of the root-knot nematode, <i>Meloidogyne incognita</i> on tomato using bioproducts of microbial origin	
M.A. Radwan, S.A.A. Farrag, M.M. Abu-Elamayem and N.S. Ahmed (Egypt).....	58
Trade-offs between complementarity and redundancy in the use of different sampling techniques for ground-dwelling ant assemblages	
J.L.P. de Souza, F.B. Baccaro, V.L. Landeiro, E. Franklin and W.E. Magnusson (Brazil).....	63

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsol>



0929-1393(201205)56:1-L

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091



# Applied Soil Ecology

VOL. 57

CONTENTS

JUNE 2012

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database SciVerse Scopus®. Full text available on SciVerse ScienceDirect®.

Chemical fertilizer and organic manure inputs in soil exhibit a vice versa pattern of microbial community structure Q.-C. Zhang, I.H. Shamsi, D.-T. Xu, G.-H. Wang, X.-Y. Lin, G. Jilani, N. Hussain and A.N. Chaudhry (Pakistan, PR China) .....	1
The detection of mating type genes of <i>Tuber melanosporum</i> in productive and non productive soils E. Zampieri, R. Rizzello, P. Bonfante and A. Mello (Italy) .....	9
Short-term carbon allocation and root lignin of Cry3Bb Bt and NonBt corn in the presence of corn rootworm K. Xue, R.C. Serohijos, M. Devare, J. Duxbury, J. Lauren and J.E. Thies (USA, Philippines) .....	16
Functional and structural responses of bacterial and methanogen communities to 3-year warming incubation in different depths of peat mire S.-Y. Kim, C. Freeman, N. Fenner and H. Kang (South Korea, UK) .....	23
Changes in flavonoids secreted by <i>Phaseolus vulgaris</i> roots in the presence of salt and the plant growth-promoting rhizobacterium <i>Chryseobacterium balustinum</i> M.S. Dardanelli, F.J.F. de Córdoba, J. Estévez, R. Contreras, M.T. Cubo, M.Á. Rodríguez-Carvajal, A.M. Gil-Serrano, F.J. López-Baena, R. Bellogín, H. Manyani, F.J. Ollero and M. Megías (Spain, Argentina) .....	31
Agricultural intensification and de-intensification differentially affect taxonomic diversity of predatory mites, earthworms, enchytraeids, nematodes and bacteria M.B. Postma-Blaauw, R.G.M. de Goede, J. Bloem, J.H. Faber and L. Brussaard (The Netherlands) .....	39
Organic amendments as strategy to increase organic matter in particle-size fractions of a semi-arid soil C. Nicolás, T. Hernández and C. García (Spain) .....	50
Response of selected soil biological properties to stump presence and age in a managed subtropical forest ecosystem Q. Wang, F. Xiao, S. Wang and G. Xu (PR China) .....	59

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsoil>



0929-1393(201206)57:1-H

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091



# Applied Soil Ecology

VOL. 58

CONTENTS

JULY 2012

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database SciVerse Scopus®. Full text available on SciVerse ScienceDirect®.

Growth responses to and accumulation of vanadium in agricultural soil fungi A. Ceci, O. Maggi, F. Pinzari and A.M. Persiani (Italy) .....	1
Soil aggregation and total diversity of bacteria and fungi in various tillage systems of sub-humid and semi-arid Kenya J. Kihara, C. Martius, A. Bationo, M. Thuita, D. Lesueur, L. Herrmann, W. Amelung and P.L.G. Vlek (Kenya, Germany, Brazil, Ghana) .....	12
Characterization of cultivable putative endophytic plant growth promoting bacteria associated with maize cultivars ( <i>Zea mays</i> L.) and their inoculation effects <i>in vitro</i> A. Montañez, A.R. Blanco, C. Barlocco, M. Beracochea and M. Sicardi (Uruguay) .....	21
Perspectives in modelling earthworm dynamics and their feedbacks with abiotic soil properties A.-K. Schneider and B. Schröder (Germany) .....	29
Growth of methanogens in an oxic soil microcosm: Elucidation by a DNA-SIP experiment using <sup>13</sup> C-labeled dried rice callus C.G. Lee, T. Watanabe, J. Murase, S. Asakawa and M. Kimura (Japan) .....	37
Soil microbial biomass, functional microbial diversity, and nematode community structure as affected by cover crops and compost in an organic vegetable production system A. Nair and M. Ngouajio (USA) .....	45
Changes in soil microbial communities as affected by intensive cattle husbandry D. Elhottová, A. Koubová, M. Šimek, T. Cajthaml, J. Jirout, J. Esperschuetz, M. Schlöter and A. Gättinger (Czech Republic, Germany) .....	56
Nematodes as an indicator of plant–soil interactions associated with desertification J.R. Klass, D.P.C. Peters, J.M. Trojan and S.H. Thomas (USA) .....	66

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsoil>



0929-1393(201207)58:1-D

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091



# Applied Soil Ecology

VOL. 59

CONTENTS

AUGUST 2012

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database SciVerse Scopus®. Full text available on SciVerse ScienceDirect®.

Variation in rhizosphere soil microbial index of tree species on seasonal flooding land: An <i>in situ</i> rhizobox approach D. Liu, S. Fang, Y. Tian and X. Dun (PR China).....	1
Publisher's note .....	12
Effect of the nursery application of bioorganic fertilizer on spatial distribution of <i>Fusarium oxysporum</i> f. sp. <i>niveum</i> and its antagonistic bacterium in the rhizosphere of watermelon N. Ling, W. Zhang, S. Tan, Q. Huang and Q. Shen (China).....	13
Subhumid pasture soil microbial communities affected by presence of grazing, but not grazing management L.G. Oates, T.C. Balser and R.D. Jackson (USA).....	20
Diversity of <i>Bradyrhizobium</i> populations associated to soybean–maize rotations in Québec, Eastern Canada, and their potential to improve growth of both plant species D. Prévost, C. Gauvin-Trudel and C. Juge (Canada).....	29
Effects of yellow mustard amendments on the soil nematode community in a potato field with focus on <i>Globodera rostochiensis</i> Y. Valdes, N. Viaene and M. Moens (Belgium) .....	39
Resiliency of a nematode community and suppressive service to tillage and nematicide application P. Timper, R. Davis, G. Jagdale and J. Herbert (USA) .....	48
Nitrogen transformation in the rhizospheres of two subalpine coniferous species under experimental warming H. Yin, Z. Xu, Z. Chen, Y. Wei and Q. Liu (PR China).....	60
Divergent consequences of hydrochar in the plant–soil system: Arbuscular mycorrhiza, nodulation, plant growth and soil aggregation effects C. George, M. Wagner, M. Kücke and M.C. Rillig (Germany).....	68
Do burned areas recover from inside? An experiment with soil fauna in a heterogeneous landscape K.B. Gongalsky, A. Malmström, A.S. Zaitsev, S.V. Shakhb, J. Bengtsson and T. Persson (Russia, Sweden).....	73
Patterns of earthworm communities and species traits in relation to the perturbation gradient of a restored floodplain B. Fournier, E. Samaritani, J. Shrestha, E.A.D. Mitchell and R.-C. Le Bayon (Switzerland) .....	87
Microbial indicators of soil health as tools for ecological risk assessment of a metal contaminated site in Brazil J.C. Niemeyer, G.B. Lolata, G.M. de Carvalho, E.M. Da Silva, J.P. Sousa and M.A. Nogueira (Portugal, Brazil) .....	96
Arbuscular mycorrhizal fungi and soil microbial communities under contrasting fertilization of three medicinal plants S. Zubek, A.M. Stefanowicz, J. Błazkowski, M. Niklińska and K. Seidler-Łożykowska (Poland).....	106
Changes in soil bacterial communities following liming of acidified forests H. Clivot, C. Pagnout, D. Aran, S. Devin, P. Bauda, P. Poupin and F. Guérold (France).....	116
Characterization of multifaceted <i>Bacillus</i> sp. RM-2 for its use as plant growth promoting bioinoculant for crops grown in semi arid deserts Minaxi, L. Nain, R.C. Yadav and J. Saxena (India) .....	124

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsoil>



0929-1393(201208)59:1-9

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091

# Applied Soil Ecology

VOL. 60

CONTENTS

SEPTEMBER 2012

(Abstracted/indexed in: Biobase; BIOSIS; CAB International "Soils and Fertilizers"; Ecological Abstracts; EMBiology; Geobase; Thomson Scientific Alerting Services; Thomson Scientific Current Contents (Agriculture, Biology and Environmental Sciences); Thomson Scientific Citation Index; Thomson Scientific SciSearch). Also covered in the abstract and citation database SciVerse Scopus®. Full text available on SciVerse ScienceDirect®.

**Special Issue: Selected Papers from the 2011 Soil Ecology Society Conference**  
**Guest Editor: J.A. (Tony) Trofymow**

## Introduction

Selected papers from the 2011 Soil Ecology Society conference: An emphasis on fungi and forest or prairie soils

J.A. Trofymow (Canada) .....	1
Coarse woody debris retention in subalpine clearcuts affects ectomycorrhizal root tip community structure within fifteen years of harvest J.K.M. Walker, V. Ward, C. Paterson and M.D. Jones (Canada) .....	5
Impacts of forest post thinning residues on soil chemistry, fauna and roots: Implications of residue removal in Finland J. Dighton, H.-S. Helmisaari, M. Maghirang, S. Smith, K. Malcolm, W. Johnson, L. Quast, B. Lallier, D. Gray, H. Setälä, M. Starr, J. Lairo and M. Kukkola (USA, Finland) .....	16
The impact of garlic mustard on sandy forest soils S.J. Morris, D.L. Herrmann, J. McClain, J. Anderson and K.D. McConnaughay (USA) .....	23
Functional responses of ectomycorrhizal fungal communities to long-term fertilization of lodgepole pine ( <i>Pinus contorta</i> Dougl. ex Loud. var. <i>latifolia</i> Engelm.) stands in central British Columbia M.D. Jones, L.A. Phillips, R. Treu, V. Ward and S.M. Berch (Canada) .....	29
The influence of contrasting ground cover vegetation on soil properties in the NJ pine barrens D.M. Gray, J. Swanson and J. Dighton (USA) .....	41
Comparison of soil bacterial communities between coastal and inland forests in a subtropical area Y.-T. Lin, W.B. Whitman, D.C. Coleman and C.-Y. Chiu (Taiwan, USA) .....	49
Mycorrhization rates of two grasses following alterations in moisture inputs in a southern mixed grass prairie H. Owens, J. LaFantasie and P.B. Adler (USA) .....	56
Arbuscular mycorrhizal fungi and vascular plant species abundance and community structure in tallgrass prairies with varying agricultural disturbance histories H.J. Stover, R.G. Thorn, J.M. Bowles, M.A. Bernards and C.R. Jacobs (Canada) .....	61
Effects of organic amendments with various nitrogen levels on arbuscular mycorrhizal fungal growth K. Aleklett and H. Wallander (Sweden) .....	71
The potential of soil amendments for restoring severely disturbed grasslands B.M. Ohsowski, J.N. Klironomos, K.E. Dunfield and M.M. Hart (Canada) .....	77
Plant residue chemistry impacts soil processes and microbial community structure: A study with <i>Arabidopsis thaliana</i> cell wall mutants S. Gul, J.K. Whalen, B.E. Ellis and S.J. Grayston (Canada, Pakistan) .....	84
Tag-encoded pyrosequencing analysis of the effects of fungicide application and plant genotype on rhizobacterial communities C. Yang, C. Hamel, Y. Gan and V. Vujanovic (Canada, Japan) .....	92
Phytochemicals and spore germination: At the root of AMF host preference? W. Ellouze, C. Hamel, A.F. Cruz, T. Ishii, Y. Gan, S. Bouzid and M. St-Arnaud (Canada, Tunisia, Japan) .....	98

Have you visited the journal's website recently?

New FREE Online Features:

Tables of Contents NOW WITH ABSTRACTS. Full Search on Abstracts, Authors and Keywords, Author and Subject Index

Visit the Applied Soil Ecology website today!

Bookmark: <http://www.elsevier.com/locate/apsoil>



0929-1393(201209)60:1-C

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SciVerse ScienceDirect

05091