

ISSN 0564 - 3945

CN 21-1172/S



QK1831458

土壤通报

CHINESE JOURNAL OF SOIL SCIENCE

第 49 卷 第 3 期 Vol.49 No.3

2018

ISSN 0564-3945



9 770564 394181

06>

中国土壤学会 主办



科学出版社

出版

万方数据

土壤通报

(Turang Tongbao)

第 49 卷 第 3 期 2018 年 6 月

目 次

研究报告

- 新疆县域土壤黏粒历史数据的不确定性 魏 影, 轩俊伟, 张文太, 武红旗, 张 丽 (505)
- 基于网格搜索和交叉验证支持向量机的地表土壤容重预测 郭李娜, 樊贵盛 (512)
- 基于数字图像三维重建的土壤粗糙度测量 谢天铎, 杨艳山, 霍连飞, 李毅念, 何瑞银, 丁启朔 (519)
- 生态宜居视角下农村居民点用地集约利用评价及障碍因子诊断 朱永明, 李 葛, 张 慧, 赵 丽 (525)
- 土壤功能评价在土地利用规划中的应用探讨
——以郑州市黄河南岸局部区域为例 梁思源 (531)
- 经济发达地区城乡建设用地转型时空演变特征
——以江苏通州为例 陈昌玲, 张全景, 诸培新 (537)
- 东北黑土区荒地开垦种稻后土壤养分及 pH 值的变化特征
..... 迟美静, 侯 玮, 孙 莹, 范庆锋, 虞 娜, 邹洪涛, 安 晶, 张玉玲 (546)
- 滨海滩涂围垦对土壤团聚体分布及其有机碳富集的影响
——以江苏省如东县垦区为例 李建国, 赵宴青, 袁冯伟,
王 欢, 张椿林, 岳梦凡, 濮励杰, 徐彩瑶, 张忠启, 刘丽丽 (552)
- 毛乌素沙地南缘人工植被恢复对表土机械组成和养分的影响
..... 吴永胜, 郭建英, 刘 静, 刘铁军 (560)
- 浙西 3 类石灰岩发育土壤有机碳和团聚体稳定性的研究 邬奇峰, 谢国雄, 王京文, 章明奎 (567)
- 不同温度花生壳生物炭孔隙特征及其差异
..... 付仲毅, 于晓娜, 张晓帆, 李志鹏, 凌天孝, 周涵君, 孟 琦, 张 胜, 叶协锋 (575)
- 核磁冻融微孔度技术应用于测定生物质炭及土壤团聚体纳米孔隙
..... 马 冲, 冯 潇, 丁元君, 张旭辉, 程 琨, 潘根兴 (582)
- 不同种植期棚室黄瓜土壤放线菌多样性研究
..... 陈 锐, 孙晓宇, 赵玲侠, 瞿 佳, 门 欣, 路鹏鹏, 沈卫荣 (588)
- 基于高通量测序技术的樱桃根际细菌群落研究 赵柏霞, 潘凤荣, 韩晓日 (596)
- 基于高通量测序技术研究土壤细菌对盐生植被演替的响应
..... 苗 菁, 宗万松, 吕 敏, 丁 晶, 王晓凤, 郭笃发 (602)
- 春季解冻期 3 种温带森林土壤酶活性动态变化 李 龙, 尹 航, 黄世臣, 傅民杰 (609)
- 砖红壤不同温度、水分及碳氮源条件下硝化和反硝化特征
..... 王大鹏, 郑 亮, 罗雪华, 王文斌, 张永发, 薛欣欣, 吴小平 (616)
- 缓释外源一氧化氮 (NO) 与缓释水杨酸 (SA) 对盐胁迫下冬小麦生理特性的影响
..... 董元杰, 陈为峰, 贺明荣 (623)
- 不同裂解温度稻秆生物炭对土壤 CH₄、N₂O 排放影响分析
..... 张向前, 张玉虎, 赵 远, 侯国军, 荆玉琳, 胡 茜 (630)
- 多重干湿交替对城市河岸带土壤氮转化及 N₂O 排放的影响研究
..... 邓焕广, 张智博, 张 菊, 殷山红, 王东启, 陈振楼 (640)
- 耕地土壤中微量元素含量空间分布及施肥对策 曹榕彬 (646)
- 秸秆机械集中沟埋还田对稻麦轮作作物生长和产量的影响
..... 宋广鹏, 孙新素, 何瑞银, 卞新民, 陈长青 (653)

生物质炭对设施连作土壤性质及黄瓜生长产量的影响	张功臣, 陈建美, 赵征宇, 李磊, 秦玉红, 王波, 张守才 (659)
不同氮素形态对紫苏生长及品质的影响	隋利, 王康才, 易家宁, 禚汉美, 魏莲, 韦宏杰 (667)
硅酸钙对盐碱土改良效果研究	李凯, 李跃进, 张琛平, 宋纪雷 (673)
生物肥对整理地土壤的改良效果及烤烟产量和质量的影响	张久权, 林建麒, 张瀛, 陈刚 (678)
桂南沿海诸河流域土壤侵蚀特征分析	王丹媛, 卢远, 刘斌涛, 黄萍 (684)
安溪县茶园集中开发区小流域泥沙来源分析 ——以双岐溪为例	刘岑薇, 张燕, 杨庆, 王义祥 (692)
硅对分蘖期不同品种水稻镉吸收积累的影响	耿杰, 宋明阳, 李军, 黄元财, 韩颖, 何娜, 赵吉成, 彭兴荡 (697)
硒对镉胁迫下植物壶瓶碎米荠镉含量的影响	闫少凯, 王丽, 陶旭, 周守标, 陈鑫, 张金铭 (705)
县域尺度土壤重金属污染特征及源解析 ——以赵县为例	赵红安, 臧亮, 张贵军, 朱永明 (710)
滕州土壤重金属污染特征及生态风险评价	秦鹏一, 王敏, 高宗军, 邹晶莹, 王昕翌, 冯建国, 庞绪贵 (720)
河岸缓冲带不同植被配置方式对重金属的净化效果	刘宏伟, 梁红, 高伟峰, 沈海龙, 高大文 (727)
专题综述	
冻融作用对土壤物理、化学和生物学性质影响的研究进展	韩露, 万忠梅, 孙赫阳 (736)
农田生态系统土壤呼吸测定方法研究进展	李亚森, 丁松爽, 刘国顺 (743)
连作自毒物质与根际微生物互作研究进展	安志刚, 郭凤霞, 陈垣, 白刚 (750)

CHINESE JOURNAL OF SOIL SCIENCE

Vol.49 No.3 Jun., 2018

CONTENTS

Research Articles

- Uncertainty of Legacy Data of Soil Clay Contents at County Scale in Xinjiang WEI Ying, XUAN Jun-wei, ZHANG Wen-tai, WU Hong-qi, ZHANG Li (505)
- Support Vector Machines for Surface Soil Density Prediction based on Grid Search and Cross Validation GUO Li-na, FAN Gui-sheng (512)
- Measurement of Soil Roughness by 3D Reconstruction Based on Digital Images XIE Tian-hua, YANG Yan-shan, HUO Lian-fei, LI Yinian, HE Ruiyin, DING Qi-shuo (519)
- Evaluation of Rural Residential Land Intensive Use and Diagnosis of its Obstacle Factors from the Perspective of Ecological Livability ZHU Yong-ming, LI Ge, ZHANG Hui, ZHAO Li (525)
- The Application of Soil Function Evaluation in Land Use Planning—A Case Study of the South Region of the Yellow River in Zhengzhou LIANG Si-yuan (531)
- Spatial – Temporal Evolution Characteristics of Urban–rural Construction Land in Developed Areas: a Case Study of Tongzhou in Jiangsu Province CHEN Chang-ling, ZHANG Quan-jing, ZHU Pei-xin (537)
- Characteristics of Soil Nutrients and pH Value of Paddy Fields with Different Planted Years in Black Soil Region of Northeast China CHI Mei-jing, HOU Wei, SUN Ying, FAN Qing-feng, YU Na, ZOU Hong-tao, ZHANG Yu-ling (546)
- The Impact of Reclamation on Soil Aggregates and Organic Carbon Enrichment in Coastal Areas: a Case Study in Rudong County, Jiangsu Province LI Jian-guo, ZHAO Yan-qing, YUAN Feng-wei, WANG Huan, ZHANG Chun-lin, YUE Meng-fan, PU Li-jie, XU Cai-yao, ZHANG Zhong-qi, LIU Li-li (552)
- Effects of Artificial Vegetation Restoration on Mechanical Composition and Nutrient Content of Surface Soil in Southern Mu Us Sandy Land, Northern China WU Yong-sheng, GUO Jian-ying, LIU Jing, LIU Tie-jun (560)
- The Stability of Organic Carbon and Aggregates of Three Limestone Soils in the Western Zhejiang WU Qi-feng, XIE Guo-xiong, WANG Jing-wen, ZHANG Ming-kui (567)
- Temperature Effect on Pore Characteristics of Peanut-shell-biochar FU Zhong-yi, YU Xiao-na, ZHANG Xiao-fan, LI Zhi-peng, LING Tian-xiao, ZHOU Han-jun, MENG Qi, ZHANG Sheng, YE Xie-feng (575)
- Nano-pore Distribution of Biochar and Soil Aggregates Revealed with the Technology of Nuclear Magnetic Resonance Cryoporometry MA Chong, FENG Xiao, DING Yuan-jun, ZHANG Xu-hui, CHENG Kun, PAN Gen-xing (582)
- Diversity of Soil Actinomycetes in Greenhouse at Different Growth Stages of Cucumber CHEN Rui, SUN Xiao-Yu, LU Peng-Peng, ZHAO Ling-Xia, QU Jia, MEN Xin, LU Peng-Peng, SHEN Wei-Rong (588)
- Bacterial Community Development based on Illumina Amplicon Sequencing of 16S rDNA in the Cherry Rhizosphere ZHAO Bai-xia, PAN Feng-rong, HAN Xiao-ri (596)
- Response of Soil Bacterial Community Structure to Halophytic Vegetation Succession Based on Pyrosequencing MIAO Jing, ZONG Wan-song, LV Min, DING Jing, WANG Xiao-feng, GUO Du-fa (602)
- Dynamic Changes of Soil Enzyme Activities in Three Types of Temperate Forest during Spring Thawing Period LI Long, YIN Hang, HUANG Shi-Chen, FU Min-jie (609)
- Nitrification and Denitrification under Different Temperature, Moisture, Carbon and Nitrogen Sources in Latosols WANG Da-peng, ZHENG Liang, LUO Xue-hua, WANG Wen-bin, ZHANG Yong-fa, XUE Xin-xin, WU Xiao-ping (616)
- Effects of Slow Release Exogenous Nitric Oxide and Slow Release Salicylic Acid on Physiological Characteristics of Winter Wheat under Salt Stress DONG Yuan-jie, CHEN Wei-feng, HE Ming-rong (623)
- Influence of Pyrolysis Temperatures of Biochar Obtained from the Rice Straw on CH₄ and N₂O Emissions from Soil

- ZHANG Xiang-qian, ZHANG Yu-hu, ZHAO Yuan, HOU Guo-jun, Jing Yu-lin, HU qian (630)
 Effect of Repetitive Alternation of Drying and Wetting on Nitrogen Transformation and N₂O Emission in Surface Soil
 of Urban Riparian Zones DENG Huan-guang, ZHANG Zhi-bo,
 ZHANG Ju, YIN Shan-hong, WANG Dong-qi, CHEN Zhen-lou (640)
 Spatial Distribution and Fertilization of Medium and Trace Elements in Cultivated Land CAO Rong-bin (646)
 Effect of Ditch-buried Straw Return on Crop Growth and Yield in Rice-wheat Rotation System
 SONG Guang-peng, SUN Xin-su, HE Rui-yin, BIAN Xin-min, CHEN Chang-qing (653)
 Effects of Biochar Application on Soil Characteristics, Growth and Yield of Cucumber under Continuous Cropping
 ZHANG Gong-chen, CHEN Jian-mei,
 ZHAO Zheng-yu, LI Lei, QIN Yu-hong, WANG Bo, ZHANG Shou-cai (659)
 Effect of Different Nitrogen Forms on Growth and Quality of *Perilla frutescens* (L.) Britt
 SUI Li, WANG Kang-cai, YI Jia-ning, XUAN Han-mei, WEI Lian, WEI Hong-jie (667)
 Improvement Effect of Calcium Silicate on Saline-alkali Soil
 LI Kai, LI Yue-jin, ZHANG Chen-ping, SONG Ji-lei (673)
 Effects of Bio-fertilizer Application on Soil Amelioration and Tobacco Yield and Quality after Land Consolidation
 ZHANG Jiu-quan, LIN Jian-qi, ZHANG Ying, CHEN Gang (678)
 Features of Soil Erosion in the Coastal River Basin of Southern Guangxi
 WANG Dan-yuan, LU Yuan, LIU Bin-tao, HUANG Ping (684)
 Sediment Source in a Small Scale Watershed of Tea Garden, a Case Study of the Shuangqi River, Anxi County
 LIU Cen-wei, ZHANG Yan, YANG Qing, WANG Yi-xiang (692)
 Effects of Silicon Fertilizer on Cadmium Uptake and Accumulation in Different Rice Varieties at Tillering Stage
 GENG Jie, SONG Ming-yang, LI Jun,
 HUANG Yuan-cai, HAN Ying, HE Na, ZHAO Ji-cheng, PENG Xing-dang (697)
 Effects of Selenium on Cadmium Content in *Cardamine hupingshanensis* under Cadmium Stress
 YAN Shao-kai, WANG Li, TAO Xu, ZHOU Shou-biao, Chen Xin, Zhang Jin-ming (705)
 Soil Heavy Metal Pollution Characteristics and Source Apportionment at County Scale
 -Take Zhaoxian County as an Example ... ZHAO Hong-an, ZANG Liang, ZHANG Gui-jun, ZHU Yong-ming (710)
 Pollution Characteristics and Ecological Risk Assessment of Soil Heavy Metals in Tengzhou
 Qin Peng-yi, Wang Min, Gao Zong-jun, Zou Jing-ying, Wang Xin-yi, Feng Jian-guo, PANG Xu-gui (720)
 Purification Effect of Heavy Metal by Different Vegetative Configurations in Buffer Strips
 LIU Hong-wei, LIANG Hong, GAO Wei-feng, SHEN Hai-long, GAO Da-wen (727)
- ## Reviews and Comments
- Research Progress on the Effects of Freezing and Thawing on Soil Physical, Chemical and Biological Properties
 HAN Lu, WAN Zhong-mei, SUN He-yang (736)
 Research Progress on the Methods of Soil Respiration Measurement in Farmland Ecosystems
 LI Ya-sen, DING Song-shuang, LIU Guo-shun (743)
 Advances in Interactions between Autotoxic Compounds and Rhizosphere Microbes in Continuous Cropping Obstacles
 AN Zhi-gang, GUO Feng-xia, CHEN Yuan, BAI Gang (750)

中文核心期刊
中国科学引文数据库(CSCD)来源期刊
中国学术期刊综合评价数据库(CAJCED)统计源期刊
中国期刊全文数据库(CJFD)全文收录期刊
《CAJ-CD 规范》执行优秀奖
《中国期刊网》、《中国学术期刊(光盘版)》全文收录期刊
《中国核心期刊(遴选)数据库》收录期刊
中国科技论文统计源期刊(中国科技核心期刊)
《中国生物学文摘》和生物学文献数据库收录期刊
辽宁省一级期刊
RCCSE 中国权威学术期刊

土壤通报 Turang Tongbao

(双月刊 1957 年创刊)

第 49 卷 第 3 期(总第 294 期) 2018 年 6 月

CHINESE JOURNAL OF SOIL SCIENCE

(Bimonthly, Started in 1957)

Vol.49 No.3 Jun., 2018

主管单位	中国科学技术协会	Administered by	China Association for Science and Technology
主办单位	中国土壤学会	Sponsored by	Soil Science Society of China
承办单位	沈阳农业大学	Undertaken by	Shenyang Agricultural University
编 辑	《土壤通报》编辑委员会 沈阳市沈河区东陵路 120 号, 邮政编码: 110866 网址: http://www.trtb.net	Edited by	Editorial Committee of Chinese Journal of Soil Science Add: Dongling Road 120, Shenyang 110866, China Web: http://www.trtb.net
主 编	张玉龙	Editor in Chief	ZHANG Yu-long
出 版	科学出版社 北京东黄城根北街 16 号, 邮政编码: 100717	Published by	Science Press 16 Donghuangchenggen North Street, Beijing 100717, China
印刷单位	沈阳中科印刷有限责任公司	Printed by	Shenyang Zhongke Printing Co.Ltd.
总 发 行	辽宁省邮政公司报刊发行公司	Released by	Post Company in Liaoning Province Newspaper Distribution Companies
国内发行	全国各地邮局	Domestic Issue by	All Local Post Offices in China
国外发行	中国国际图书贸易总公司 北京 399 信箱, 邮政编码: 100048	Oversea Issue by	China International Book Trading Corporation P.O.Box 399, Beijing 100048, China

刊号: ISSN 0564-3945
CN 21-1172/S

国内邮发代号: 8-15
国外发行代号: BM8088

2018 年 6 月 6 日出版 定价: 50.00 元