

ISSN 0564 - 3945

CN 21-1172/S



QK2256307

土壤通报

CHINESE JOURNAL OF SOIL SCIENCE

第 54 卷 第 2 期 Vol. 54 No.2

2023



中国土壤学会 主办
科学出版社 出版

土壤通报

(Turang Tongbao)

第 54 卷 第 2 期 2023 年 4 月
目 次

研究报告

- 川西北生态脆弱区居民点时空演变特征及影响因素研究 李亦可, 郭晓平, 马月, 于赐刚 (253)
“三区”视角下山东省国土空间演变特征及均衡性研究 任付月, 王萍, 孙丕苓 (263)
基于神经网络优化算法的云南土壤有机质含量数字制图——以景洪市为例
..... 杨晋帆, 杨阳, 刘婷婷, 周汝良, 王艳霞, 叶江霞 (273)
基于机器学习算法的湖滨绿洲土壤电导率高光谱估算模型 孟珊, 李新国, 焦黎 (286)
桐柏山北麓土壤 pH 值空间分布特征及其影响因素
..... 温皓天, 董秋瑶, 王攀, 宋超, 杨振京, 赵元艺, 严明疆 (295)
膨润土和有机肥施用对秸秆覆盖还田紫色土肥力影响及经济效益分析
..... 胡怀舟, 张绪林, 胡邦友, 刘忠诚, 张楠, 王亚男, 张洋 (306)
麦秸配施纤维素降解细菌对果园土壤有机碳库及生化特性的影响
..... 郎冬梅, 宫诚, 朱紫檀, 郝峰鸽, 周瑞金, 扈惠灵, 张鹏 (317)
内蒙古乞秋沟流域不同林分类型对土壤养分含量的影响 刘晓民, 白嘉骏, 杨耀天, 于澜 (328)
保护性耕作对黑土有机碳组分和玉米产量的影响
..... 李宇航, 谷思玉, 何婉莹, 王紫颖, 车延静, 袁望博, 杨佳宇 (336)
钙镁肥对水稻和小龙虾产量、品质及土壤养分状况的影响
..... 韩科峰, 陈开俊, 马庆旭, 姜春, 许玉君, 怀燕, 吴良欢 (346)
生物炭与磷肥添加对红壤团聚体及其磷组分分布的影响
..... 邓伟明, 唐梦天, 郭玉栋, 池哲伟, 黄期, 尹曦芝, 蔡昆争, 田纪辉 (352)
宁夏引黄灌区日光温室集约种植区浅层地下水硝态氮含量与耕层土壤硝态氮含量的关系
..... 谭军利, 刘昊昊, 王西娜, 马俊生 (364)
基于“3414”试验的陇中半干旱区马铃薯测土配方施肥指标研究 任亮, 任稳江, 马明生 (374)
土地利用方式对西南喀斯特土壤碳、氮、磷化学计量特征及酶活性的影响
..... 郭超, 盛茂银, 何宇, 王霖娇, 石庆龙, 罗娜娜 (382)
花生壳及其生物炭施用对旱地红壤微生物活性及红薯产量的影响
..... 冯今萍, 周际海, 魏倩, 鄂茹茹, 成艳红, 黄欠如, 李大明 (392)
减氮配施炭基肥对植烟土壤微生物群落多样性的影响
..... 何晓冰, 李俊营, 许跃奇, 王晓强, 阎海涛, 王明鑫, 杨楠, 常栋 (400)
玉米秸秆覆盖还田量对黑土微生物碳代谢活性与多样性的影响
..... 刘宇奇, 朱雪峰, 鲍雪莲, 郑甜甜, 何红波, 梁超, 解宏图 (407)

- 有机物料和氧化钙对连作花生土壤微生物与酶活性及产量的影响
..... 陈 龙, 余明慧, 李航宇, 杨 光, 金开美, 邹 奎, 蓝黎明, 柳楷婧 (416)
- 辽宁省畜禽便产污系数测算与环境承载力预警分析
..... 吴晓楠, 尤 佳, 杜德来, 赵浩东, 李 靖, 于 乐, 赫亮亮, 李悠然, 杜立宇 (424)
- 两种不同土壤对水稻镉吸收及其动态积累特征的影响
..... 黄柯依, 刘 玉, 任雯靖, 贺 信, 张 璇, 黄芸培, 姜晓婷, 黄高翔 (432)
- 油葵和苦荬菜根际土壤中镉和锌的活化机制及修复潜力比较
..... 曾春阳, 曾馨怡, 邓昭赞, 杨 洋, 邹冬生, 曾清如 (441)
- 生物炭与沸石复配对碱性土壤铅镉有效性的影响 丁爱芳, 刘存丽, 吴晓霞 (454)
- 冀东平原农田土壤重金属污染源分析与风险评价 魏洪斌, 罗 明, 吴克宁, 陈庭永 (462)
- 土壤重金属潜在生态风险指数法优化研究
——以重庆市城口县为例 吴 梅, 刘属灵, 袁余洋, 赵家宇, 刘 怡, 刘双燕, 刘永林 (473)

专题综述

- 基于知识图谱的生物炭对水循环要素过程影响研究进展
..... 吕振豫, 秦天玲, 刘志武, 董义阳, 聂汉江, 刘超群 (481)
- 盐碱地资源分析及利用研究展望 胡 炎, 杨 帆, 杨 宁, 贾 伟, 崔 勇 (489)
- 东北黑土地不同类型区主要特征及保护利用对策
..... 徐英德, 裴久渤, 李双异, 邹洪涛, 汪景宽, 张佳宝 (495)

CHINESE JOURNAL OF SOIL SCIENCE

Vol.54 No.2 Apr., 2023

CONTENTS

Research Articles

- Spatio-temporal Evolution and Driving Factors of Settlements in Ecologically Fragile Area of Northwestern Sichuan LI Yi-ke, GUO Xiao-ping, MA Yue, YU Ci-gang (253)
- Spatial Evolution Characteristics and Equilibrium of Shandong Province from the Perspective of “Three Zones” REN Fu-yue, WANG Ping, SUN Pi-ling (263)
- Digital Mapping of Soil Organic Matter Content in Yunnan Based on Neural Network Optimization Algorithm —Take Jinghong City as an Example YANG Jin-fan, YANG Yang, LIU Ting-ting, ZHOU Ri-liang, WANG Yan-xia, YE Jiang-xia (273)
- Hyperspectral Estimation Model of Soil Conductivity in the Lakeside Oasis Based on Machine Learning Algorithm MENG Shan, LI Xin-guo, JIAO Li (286)
- Spatial Variation Characteristics and Influencing Factors of Soil pH Value at the Northern Foot of Tongbai Mountain WEN Hao-tian, DONG Qiu-yao, WANG Pan, SONG Chao, YANG Zhen-jing, ZHAO Yuan-yi, YAN Ming-jiang (295)
- Effects of Bentonite and Manure on Fertility and Economic Benefit of Purple Soil under Straw Mulching HU Huai-zhou, ZHANG Xu-lin, HU Bang-you, LIU Zhong-cheng, ZHANG Nan, WANG Ya-nan, ZHANG Yang (306)
- Effects of the Combined Application of Wheat Straw and Cellulose Degrading Bacteria on Soil Organic Carbon Pool and Biochemical Properties in Orchards LANG Dong-mei, GONG Cheng, ZHU Zi-tan, HAO Feng-ge, ZHOU Rui-jin, HU Hui-ling, ZHANG Peng (317)
- Effects of Different Stand Types on Soil Nutrient Contents in Geqiugou Watershed of Inner Mongolia LIU Xiao-min, BAI Jia-jun, YANG Yao-tian, YU Lan (328)
- Effects of Conservation Tillage Practices on Organic Carbon Components and Maize Yield in Black Soil LI Yu-hang, GU Si-yu, HE Wan-ying, WANG Zi-ying, CHE Yan-jing, YUAN Wang-bo, YANG Jia-yu (336)
- Effects of Calcium and Magnesium Fertilizer Application on Yield Quality of Rice and Shrimp and Soil Nutrients HAN Ke-feng, CHEN Kai-jun, MA Qing-xu, JIANG Chun, XU Yu-jun, HUAI Yan, WU Liang-huan (346)
- Effects of Biochar and Phosphorus Application on Red Soil Aggregates and Their Phosphorus Components Distribution DENG Wei-ming, TANG Meng-tian, GUO Yu-dong, CHI Zhe-wei, HUANG Qi, KUANG Xi-zhi, CAI Kun-zheng, TIAN Ji-hui (352)
- Relationship between Nitrate Nitrogen Content in Shallow Groundwater and Soil in Intensive Greenhouse System of the Ningxia Yellow River Irrigation Region TAN Jun-li, LIU Hao-hao, WANG Xi-na, MA Jun-sheng (364)
- Formula Fertilization Index of Potato Based on the “3414” Experiment in Semi-arid Area of Central Gansu REN Liang, REN Wen-jiang, MA Ming-sheng (374)
- Effects of Land Use Types on Soil Carbon, Nitrogen, Phosphorus Stoichiometric Characteristics and Enzyme Activities in the Karst Area of Southwest China GUO Chao, SHENG Mao-yin, HE Yu, WANG Lin-jiao, SHI Qing-long, LUO Na-na (382)
- Effects of Peanut Shell and Its Biochar Application on Microbial Activity and Sweet Potato Yield in Dryland Red Soil FENG Jin-ping, ZHOU Ji-hai, WEI Qian, GAO Ru-ru, CHENG Yan-hong, HUANG Qian-ru, LI Da-ming (392)

Effect of Nitrogen Reduction Combined with Biochar-based Fertilizer on Microbial Community Diversity of Tobacco-planting Soil	HE Xiao-bing, LI Jun-ying, XU Yue-qí, WANG Xiao-qiang, YAN hai-tao, WANG Ming-xin, YANG Nan, CHANG Dong	(400)
Impact of Corn Stover Mulch Quantity on Microbial Carbon Metabolic Activities and Diversity of Black Soil	LIU Yu-qí, ZHU Xue-feng, BAO Xue-lian, ZHENG Tian-tian, HE Hong-bo, LIANG Chao, XIE Hong-tu	(407)
Effects of Organic Materials and Calcium-oxide on Soil Microorganism, Enzyme Activities and Yield of Peanut in Continuous Cropping	CHEN Long, YU Ming-hui, LI Hang-yu, YANG Guang, JIN Kai-mei, ZOU Kui, LAN Li-ming, LIU Kai-jing	(416)
Estimation of Livestock Manure Production and Environmental Bearing Capacity in Liaoning Province	WU Xiao-nan, YOU Jia, DU De-lai, ZHAO Hao-dong, LI Jing, YU Le, HE Liang-liang, LI You-ran, DU Li-yu	(424)
Effects of Two Different Paddy Soils on Cd Uptake and Dynamic Accumulation Characteristics of Rice	HUANG Ke-yi, LIU Yu, REN Wen-jing, HE Xin, ZHANG Zhen, HUANG Yun-pei, JIANG Xiao-ting, HUANG Gao-xiang	(432)
Comparison of <i>Helianthus annuus</i> L. and <i>Ixeris polyccephala</i> Cass for Cd and Zn Activation Mechanisms in Rhizosphere Soil and Remediation Potential	ZENG Chun-yang, ZENG Xin-yi, DENG Zhao-zan, YANG Yang, ZOU Dong-sheng, ZENG Qing-ru	(441)
Effects of Biochar and its Mixture of Zeolite on Availability of Lead and Cadmium in Alkaline Soil	DING Ai-fang, LIU Cun-li, WU Xiao-xia	(454)
Source Analysis and Risk Assessment of Heavy Metal Pollution in Farmland Soil in the Eastern Hebei Plain	WEI Hong-bin, LUO Ming, WU Ke-ning, CHEN Tingyong	(462)
Optimization of Potential Ecological Risk Index Method for Soil Heavy Metals ——A Case Study of Chengkou County, Chongqing City	WU Mei, LIU Shu-ling, YUAN Yu-yang, ZHAO Jia-yu, LIU Yi, LIU Shuang-yan, LIU Yong-lin	(473)
Reviews and Comments		
Research Progress on the Effects of Biochar on Water Cycle Process Based on Knowledge Graph	LÜ Zhen-yu, QIN Tian-ling, LIU Zhi-wu, DONG Yi-yang, NIE Han-jiang, LIU Chao-qun	(481)
Analysis and Prospects of Saline-alkali Land in China from the Perspective of Utilization	HU Yan, YANG Fan, YANG Ning, JIA Wei, CUI Yong	(489)
Main Characteristics and Utilization Countermeasures for Black Soils in Different Regions of Northeast China	XU Ying-de, PEI Jiu-bo, LI Shuang-yi, ZOU Hong-tao, WANG Jing-kuan, ZHANG Jia-bao	(495)

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
《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
RCCSE 中国权威学术期刊
CA 化学文摘(美) 收录期刊
JST 日本科学技术振兴机构数据库(日) 收录期刊
《CAJ-CD 规范》执行优秀奖
辽宁省一级期刊

土壤通报
Turang Tongbao

(双月刊 1957 年创刊)
第 54 卷 第 2 期(总第 323 期) 2023 年 4 月

CHINESE JOURNAL
OF SOIL SCIENCE
(Bimonthly, Started in 1957)

Vol.54 No.2 Apr., 2023

主管单位 中国科学技术协会
主办单位 中国土壤学会
承办单位 沈阳农业大学
编 辑 《土壤通报》编辑部
地址: 沈阳市沈河区东陵路120号
邮编: 110866
电话: 024-88487213
电子邮箱: trtb@163.com; trtbbjb@126.com
网址: www.trtb.cbpt.cnki.net; www.trtb.net
主 编 汪景宽
出 版 科学出版社
地址: 北京市东皇城根北街16号
邮编: 100071
印 刷 沈阳中科印刷有限责任公司
总 发 行 辽宁省邮政公司报刊发行公司
国内发行 全国各地邮局
国外发行 中国国际图书贸易总公司
地址: 北京399信箱, 邮编: 100048

Administered by China Association for Science and Technology
Sponsored by Soil Science Society of China
Undertaken by Shenyang Agricultural University
Edited by Editorial Department of Chinese Journal of Soil Science
Add: No.120 Dongling Road, Shenyang,
Liaoning 110866, China
Tel: 024-88487213
E-mail: trtb@163.com; trtbbjb@126.com
Website: www.trtb.cbpt.cnki.net; www.trtb.net
Editor in Chief WANG Jing-kuan
Published by Science Press
Add: No.16 Donghuangchenggen North Street,
Beijing 100717, China
Printed by Shenyang Zhongke Printing Co.Ltd.
Released by Post Company in Liaoning Province Newspaper Distribution Companies
Domestic Issue by All Local Post Offices in China
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

2023年4月6日出版 定价: 50.00元

