



Q K 1 9 2 4 0 3 1

CN 21-1172/S

土壤通报

CHINESE JOURNAL OF SOIL SCIENCE

第 50 卷 第 2 期 Vol.50 No.2

2019

ISSN 0564-3945



中国土壤学会 主办
科学出版社 出版

土壤通报

(Turang Tongbao)

第50卷 第2期 2019年4月

目 次

研究报告

- 30年放牧草地和耕作农地土壤矿物、颗粒组成及磁性特征比较 袁杰, 曹广超, 鄂崇毅, 刁二龙, 曲聪聪 (253)
库布齐沙漠南缘光伏电站内表层沉积物粒度特征 党梦娇, 蒙仲举, 斯庆毕力格, 杨世荣 (260)
东北黑土区农田土壤水剖面分布与大气降水关系的研究 邹文秀, 陆欣春, 陈旭, 严君, 郝翔翔, 张志明, 韩晓增 (267)
西河流域不同海拔区土壤有效钾的高光谱反演 郭鹏, 李婷, 张世熔, 李智平, 梁俊捷 (274)
基于 Landsat 8 TIRS 数据与 TVDI 的流域地表土壤干旱分析 姚月锋, 李莉 (282)
2000~2015 年苏州市土地利用效益动态测度及障碍追踪分析 朱文娟, 孙华 (290)
耕地占补平衡约束下实现乡村振兴战略的土地资源管理 李晓亮, 吴克宁 (298)
伊犁河谷栗钙土区不同产量雨养麦田土壤物理性质比较研究 陈传信, 张永强, 薛丽华, 雷钧杰, 陈兴武, 刘云霄, 刘新艳, 夏麦丁·阿巴斯, 赛力汗·赛 (304)
河北张家口季节冻土温度水分时空演化相关性研究 庞丽丽, 董翰川, 冯建华, 李康 (310)
不同改良方式下滩涂围垦区土壤水盐动态
——以江苏如东为例 沈洪运, 解雪峰, 濮励杰, 朱明, 黄思华, 阚博颖, 魏文杰 (316)
复合菌剂对玉米秸秆的降解及土壤生态特性的影响 魏蔚, 宋时丽, 吴昊, 张丽, 管永祥, 李运生, 戴传超 (323)
基于傅里叶红外光谱弃耕地开垦前后土壤有机质结构变化分析 常汉达, 王晶, 张凤华 (333)
信阳茶区土壤养分的演变 李贞霞, 陈倩倩, 任秀娟, 黎星辉 (341)
减氮配施有机肥对夏玉米-冬小麦土壤硝态氮及氮肥利用的影响 李银坤, 郝卫平, 龚道枝, 夏旭, 李昊儒 (348)
臭氧浓度升高条件下秸秆还田对大豆叶片生态化学计量特征的影响 武红艳, 王岩, 赵天宏, 田荣荣, 张铭, 牟琳 (355)
不同利用方式红壤磷素有效性的深度变化
——以江西省余江县孙家小流域为例 姚怡, 王艳玲, 高振, 刘真勇 (365)
不同有机培肥方式对红壤性水稻土磷素的影响 叶会财, 李大明, 柳开楼, 余喜初, 黄庆海, 胡志华, 杨旭初, 胡惠文, 周利军, 林小兵 (374)
稀土肥不同施用方式对烟草品质的影响 熊斌, 程玉渊, 张学伟, 杨懿德, 李常军, 宁尚辉, 王生才, 景延秋, 王林 (381)
土壤施硒对茶树叶片硒及矿质元素含量的影响 秦玉燕, 王运儒, 时鹏涛, 甘志勇, 李鸿, 蒋越华, 梁宏合, 罗清 (387)
曲周县农田土壤有效微量元素含量空间变异特征及影响因素初探 于保港, 张田萌, 李可力, 王冲, 邹春琴 (395)
长三角地区稻麦轮作土壤养分对秸秆还田响应-Meta 分析 张志毅, 范先鹏, 夏贤格, 杨利, 刘冬碧, 张富林, 熊桂云, 吴茂前, 冯婷婷 (401)
杏壳生物炭对温室次生盐渍化土壤的修复效应研究 谢文达, 智燕彩, 李玘, 赵英男, 耿丽平, 张立军, 刘文菊, 李博文 (407)
土壤结构改良剂对重度碱化盐土的改良效果 秦萍, 张俊华, 孙兆军, 孙媛 (414)

不同材料在石灰性土壤中的扩散调酸效应	史李萍, 索全义, 刘长涛, 于晓雯	(422)
拉拉铜矿集中开采区土壤地球化学基线值研究 ...	周建伟, 周家云, 代 力, 钟金先, 刘兆鑫, 朱占雄	(427)
农牧交错区小叶锦鸡儿(<i>Caragana microphylla</i>)人工灌木林土壤碳氮磷化学计量特征	樊如月, 李青丰, 贺一鸣, 王庆蒙	(437)
聊城市城区不同功能区土壤黑碳含量与来源分析	张智博, 殷山红, 刘 涛, 张 菊, 邓焕广	(444)
山东武河人工湿地对磷净化的长效性及其内源磷分布与释放	李肖正, 李 宝, 屈 杰, 林政全, 李凯旋, 王凤良	(449)
抗生素 - 重金属复合污染对土壤中细菌耐药的影响	徐 艳, 师荣光, 李厚禹, 郑向群	(457)
四种典型重金属污染对土壤吸附磷的影响	邓天天, 段海煦, 刘碧波, 马 培, 孙雪梅, 范靓慧	(463)
田块尺度污染农田土壤铅、镉和砷含量的空间变异及其对土地利用的启示	赵宗生, 邱坤艳, 祝慧娜, 卓文飞, 韩 科, 王龙飞, 赵林林, 李立平	(474)
钝化剂对酸性高镉土壤钝化效果及水稻镉吸收的影响	吴 迪, 魏小娜, 彭 淦, 王恩彪, 王 远, 李婷婷	(482)
不同品种水稻对砷的吸收转运及其健康风险研究	李仁英, 张 媚, 谢晓金, 李 霖, 徐向华	(489)

专题综述

改革开放以来我国耕地利用变化及其展望	陈美球, 赖昭豪, 刘桃菊	(497)
--------------------------	---------------	-------

CHINESE JOURNAL OF SOIL SCIENCE

Vol.50 No.2 Apr., 2019

CONTENTS

Research Articles

- Soil Mineral, Mechanical Composition and Magnetic Characteristics of Grazing Grassland and Farmland in 30 years YUAN Jie, CAO Guang-chao, E Chong-yi, DIAO Er-long, QU Cong-cong (253)
- Particle Characteristics of Surface Sedimentin the Photovoltaic Power Station in the South Margin of the Kubuqi Desert DANG Meng-jiao, MENG Zhong-ju, SiqingBilige, YANG Shi-rong (260)
- Relationship between Distribution of Soil Water Contents within Soil Profiles and Precipitation in Farmland of Black Soil Region of Northeast China ZOU Wen-xiu, LU Xin-chun, CHEN Xu, YAN Jun, HAO Xiang-xiang, ZHANG Zhi-ming, HAN Xiao-zeng (267)
- Hyperspectral Estimation of Soil Available Potassium at Different Altitudes of the Xihe Watershed GUO Peng, LI Ting, ZHANG Shi-rong, LI Zhi-ping, LIANG Jun-jie (274)
- Estimation of Surface Soil Dryness Based on Landsat 8 TIRS Data and Temperature-Vegetation Dryness Index YAO Yue-feng, LI Li (282)
- Dynamic Measurement and Obstacle Tracking Analysis of Land Use Efficiency in Suzhou from 2000 to 2015 ZHU Wen-juan, SUN Hua (290)
- Land Resources Management to Realize Rural Revitalization Strategy under the Constraints of the Balance Cultivated Land Occupation and Reclamation LI Xiao-liang, WU Ke-ning (298)
- A Comparison of Physical Properties of Castanozem in Rain-fed Wheat Fields with Different Yields in the Ili River Valley CHEN Chuan-xin, ZHANG Yong-qiang, XUE Li-hua, LEI Jun-jie, CHEN Xing-wu, LIU Yun-xiao, LIU Xin-yan, XiamaidingAbasi, Sailihan Sai (304)
- Temporal and Spatial Correlation of Temperature and Moisture in Seasonal Frozen Soil in Zhangjiakou, Hebei PANG Li-li, DONG Han-chuan, FENG Jian-hua, LI Kang (310)
- Dynamics of Soil Water-salt as Affected by Different Improvement Measures in Coastal Reclamation: A Case Study of Rudong in Jiangsu Province SHEN Hong-yun, XIE Xue-feng, PU Li-jie, ZHU Ming, HUANG Si-hua, KAN Bo-ying, WEI Wen-jie (316)
- Effects of Compound Microbial Agent on Corn Straw Degradation and Soil Ecological Properties WEI Wei, SONG Shi-li, WU Hao, ZHANG Li, GUAN Yong-xiang, LI Yun-sheng, DAI Chuan-chao (323)
- Change in Soil Organic Matter Structure Before and After the Reclamation for Abandoned Farmland Based on Fourier Transform Infrared Spectrometer CHANG Han-da, WANG Jing, ZHANG Feng-hua (333)
- Soil Nutrient Evolution in Xinyang Tea Region LI Zhen-xia, CHEN Qian-qian, REN Xiu-juan, LI Xing-hui (341)
- Effects of Nitrogen Reduction and Combined Application with Organic Fertilizer on Soil Nitrate Nitrogen and Nitrogen Fertilizer Utilization Efficiency in Summer Maize and Winter Wheat Systems LI Yin-kun, HAO Wei-ping, GONG Dao-zhi, XIA Xu, LI Hao-ru (348)
- Effects of Straw Returning on the Ecological Stoichiometry of Soybean Leaves under Elevated Ozone Concentration WU Hong-Yan, WANG Yan, ZHAO Tian-Hong, TIAN Rong-rong, ZHANG Ming, MU Lin (355)
- Changes in Phosphorus Availability with Soil Depths under Different Land Use Types in the Sunjia Small Watershed, Yujiang County of Jiangxi Province YAO Yi, WANG Yan-ling, GAO Zhen, LIU Zhen-yong (365)
- Impact of Different Organic Fertilization on Red Paddy Soil Phosphorus ... YE Hui-cai, LI Da-ming, LIU Kai-lou, YU Xi-Chu, HUANG Qing-hai, HU Zhi-hua, YANG Xu-chu, HU Hui-wen, ZHOU Li-jun, LIN Xiao-bin (374)
- Effects of Different Application Modes of Rare Earth Fertilizer on Tobacco Quality XIONG Bin, CHENG Yu-yuan, ZHANG Xue-wei, YANG Yi-de, LI Chang-jun, NING Shang-hui, WANG Sheng-cai, JING Yan-qi, WANG Lin (381)
- Effects of Selenium Application on the Concentrations of Selenium and Mineral Elements in the Leaves of Tea

Plant	QIN Yu-yan,
WANG Yun-ru, SHI Peng-tao, GAN Zhi-yong, LI Hong, JIANG Yue-hua, LIANG Hong-he, LUO Qing (387)	
Spatial Variability Characteristics of Soil Available Micronutrients and their Influencing Factors in Quzhou	
..... YU Bao-gang, ZHANG Tian-meng, LI Ke-li, WANG Chong, ZOU Chun-qin (395)	
Meta-analysis of Soil Basic Nutrients Response to Straw Returning in Rice-wheat Rotation System	
..... ZHANG Zhi-yi, FAN Xian-peng,	
XIA Xian-ge, YANG Li, LIU Dong-bi, ZHANG Fu-lin, XIONG Gui-yun, WU Mao-qian, FENG Ting-ting (401)	
Effects of Biochar on the Restoration of Secondary Salinized Soil in Greenhouse	XIE Wen-da,
ZHI Yan-cai, LI Qi, ZHAO Ying-nan, GENG Li-ping, ZHANG Li-jun, LIU Wen-ju, LI Bo-wen (407)	
Effects of Soil Structural Amendments on the Improvement of Highly Alkaline Solonchaks	
..... QIN Ping, ZHANG Jun-hua, SUN Zhao-jun, SUN Yuan (414)	
Adjusting Soil Acid by the Diffusion of Different Materials in Calcareous Soils	
..... SHI Li-ping, SUO Quan-yi, LIU Chang-tao, YU Xiao-wen (422)	
Establishment of Topsoil Geochemical Baseline Value in the Concentrated Mining Area of the Lala Copper Ore, China	ZHOU Jian-wei, ZHOU Jia-yun, DAI Li, ZHONG Jin-xian, LIU Zhao-xin, ZHU Zhan-xiong (427)
Stoichiometric Characteristics of Soil Carbon, Nitrogen, and Phosphorus in <i>Caragana microphylla</i> of Agro-pastoral Ecotone	FAN Ru-yue, LI Qing-feng, HE Yi-ming, WANG Qing-meng (437)
Distribution and Source Analysis of Soil Black Carbon in the Urban Area of Liaocheng	
..... ZHANG Zhi-bo, YIN Shan-hong, LIU Tao, ZHANG Ju, DENG Huan-guang (444)	
Long-term Effectiveness of Phosphorus Purification and Internal Phosphorus Distribution and Release in Wuhe Constructed Wetland, Shandong Province	
..... LI Xiao-zheng, LI Bao, QU Jie, LIN Zheng-quan, LI Kai-xuan, WANG Feng-liang (449)	
Effects of Combined Pollution of Antibiotics and Heavy Metals on Soil Bacterial Resistance	
..... XU Yan, SHI Rong-guang, LI Hou-yu, ZHENG Xiang-qun (457)	
Effects of Four Typical Heavy Metal Pollutions on Soil Phosphorus Adsorption	
..... DENG Tian-tian, DUAN Hai-xu, LIU Bi-bo, MA Pei, SUN Xue-mei, FAN Jing-hui (463)	
Field-scale Spatial Variation of Pb, Cd and As in Contaminated Farmland Soils and its Implication for the Utilization of the Farmland	ZHAO Zong-sheng,
..... QIU Kun-yan, ZHU Hui-na, ZHUO Wen-fei, HAN Ke, WANG Long-fei, ZHAO Lin-lin, LI Li-ping (474)	
Effects of Passivators on Acid and Cadmium Farmland Soils and Cadmium Absorption by Rice	
..... WU Di, WEI Xiao-na, PENG Pai, WANG En-biao, WANG Yuan, LI Ting-ting (482)	
Arsenic Uptake and Translocation of Different Rice Cultivars and Its Health Risk	
..... LI Ren-ying, ZHANG Qi, XIE Xiao-jin, LI Lin, XU Xiang-hua (489)	
Reviews and Comments	
Changes and Prospects of Cultivated Land Use since Reform and Opening up in China	
..... CHEN Mei-qi, LAI Zhao-hao, LIU Tao-ju (497)	

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 50 卷 第 2 期(总第 299 期) 2019 年 4 月

CHINESE JOURNAL
OF SOIL SCIENCE
(Bimonthly, Started in 1957)
Vol.50 No.2 Apr., 2019

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

2019 年 4 月 6 日出版 定价: 50.00 元