

# 土壤通报

(Turang Tongbao)

第42卷 第3期 2011年6月

## 目 次

### 研究报告

#### 长江河口地区土壤肥力质量综合评价研究

- 以启东市为例 ..... 张同娟, 杨劲松, 刘广明, 杨奇勇 (513)  
西藏米拉山区东坡垂直分布土壤肥力综合评价 ..... 钟国辉, 关法春, 贺延国 (518)  
旅游干扰对二龙山风景区土壤和植被的影响 ..... 张淑花, 赵美微, 张雪萍 (523)  
冀西北高原土壤冻融特征研究 ..... 王新路, 冯丽宵, 赵光辉, 张立峰 (528)  
黑土中有效态镍提取方法的选择 ..... 刘金华, 王亚卿, 周米平, 杨靖民, 于晓斌 (534)  
浙江天台山七子花林不同海拔土壤动物群落结构及其季节性变化特征 ..... 白义, 施时迪 (539)  
石灰和有效微生物群处理条件下土壤动物群落多样性研究 ..... 高梅香, 张雪萍 (545)  
花生连作土壤微生物区系变化研究 ..... 黄玉茜, 韩晓日, 杨劲峰, 刘宁, 刘小虎 (552)  
温带森林次生演替过程中土壤微生物多样性研究 ..... 娄鑫, 崔晓阳 (557)  
高效降解烷烃的无色杆菌XL株的分离鉴定及其降解特性 ..... 司美茹, 赵云峰, 苏涛 (562)  
丛枝菌根真菌(Glomus mosseae)对玉米吸镉的影响 ..... 刘灵芝, 张玉龙, 李培军, 巩宗强 (568)  
不同施肥处理对球囊霉素土壤蛋白含量的影响 ..... 杜介方, 张彬, 解宏图, 王连峰, 何红波, 张旭东 (573)  
轮作和微生物菌肥对黄瓜连作土壤理化性状及生物活性的影响 ..... 王涛, 乔卫花, 李玉奇, 奥岩松 (578)  
拮抗菌和生物有机肥防治棉花黄萎病及其对土壤酶活性的影响 .....  
..... 王飞, 李俊华, 赵思峰, 沈其荣, 褚贵新, 危常州, 郭永盛 (584)  
土壤甲烷单加氧酶活性测定的研究 ..... 王静, 夏芳芳, 王闻伟, 何若, 沈东升 (589)  
基于GIS和地统计学的张掖市甘州区土壤全氮、有机质的空间变异特征分析 ..... 杨东, 刘强 (593)  
三江平原典型碟形湿地土壤氮素分布特征 ..... 王洋, 刘景双, 孙志高, 窦晶鑫, 赵光影 (598)  
关中地区夏玉米全生育期土壤速效养分时空分布规律 .....  
..... 徐海, 王益权, 石宗琳, 张露, 刘军, 秦宝军, 胡海燕 (603)  
运用直线加平台法确定黑土区玉米氮磷施肥量 ..... 杜东东, 赵京考, 肖同玉, 温延臣, 李莎 (607)  
甘肃河西灌区不同种植年限玉米制种田土壤理化性质变化的研究 ..... 张红菊, 赵怀勇, 秦嘉海 (612)  
不同类型沙棘人工林对土壤氮矿化速率的影响 ..... 陈金泉, 赵忠, 李玉新 (616)  
不同土壤类型对硫酸钾镁肥中钾、镁、硫吸附特性研究 .....  
..... 何春梅, 王飞, 林诚, 李清华, 李昱, 林新坚 (622)  
河南三种土壤阳离子交换量相关性及预测模型研究 ..... 张水清, 黄绍敏, 郭斗斗 (627)  
不同土壤淋洗方式下有机—无机复合材料胶结包膜肥料钾素溶出速率比较 .....  
..... 肖强, 王甲辰, 左强, 张琳, 邹国元, 赵同科, 刘宝存 (632)  
基于SUGIHARA模型的树脂包衣控释肥在土壤中释放规律的研究 .....  
..... 陈廷华, 孙焱鑫, 薛高峰, 肖强, 赵汝东, 见翠芬 (637)  
尿素营养斑对小麦苗期根系生长和微域分布的影响 .....  
..... 陈欢, 刘满强, 李学超, 杨剑波, 徐晶晶, 王斌, 胡锋, 李辉信 (642)  
潮土长期定位施肥对小麦根际土壤营养的影响 .....  
..... 介晓磊, 杨先明, 刘世亮, 刘芳, 化党领, 李学军, 李宗军 (648)  
长期不同施肥管理对黑土活性有机碳及碳库管理指数的影响 ..... 张迪, 韩晓增, 侯雪莹 (654)  
城市化进程中的土壤有机碳库演变趋势分析 ..... 许乃政, 张桃林, 王兴祥, 刘红樱 (659)  
短期免耕对黑土有机碳、全氮和速效养分的影响 .....

- ..... 李文凤, 梁爱珍, 张晓平, 时秀焕, 申 艳, 范如芹, 杨学明 (664)  
有机无机肥配施对灌耕灰钙土碱性磷酸酶和土壤磷素的影响 ..... 刘淑英 (670)  
小麦季磷肥施用对后作玉米的效果及土壤中无机磷形态转化的影响 .....
- ..... 林国林, 云 鹏, 陈 磊, 高 翔, 张金涛, 卢昌艾, 刘荣乐, 汪 洪 (676)  
不同施肥处理对玉米根际土壤磷素利用的影响 ..... 李翠兰, 李志洪, 张晋京, 高 强 (681)  
有机酸对红壤磷素吸附特性的影响 ..... 王艳玲, 朱红霞, 王 琳, 何园球 (685)  
不同耕作和施肥措施对潮土生物学特性的影响 ..... 魏 蔚, 李运生, 戴传超, 李培栋, 欧阳竹 (692)  
长期施肥对黑土和暗棕壤土壤酶活性及土壤养分的影响 ..... 焦晓光, 魏 丹, 隋跃宇 (698)  
 $MnSO_4$  浸种对马铃薯幼苗质量及产量形成的影响 ..... 马光恕, 侯莉华, 廉 华, 林晓影, 王彦宏 (704)  
半干旱区中耕深松对土壤水分和作物产量的影响 ..... 肖继兵, 孙占祥, 杨久廷, 张玉龙, 郑家明, 刘 洋 (709)  
小流域土壤可蚀性的空间变异及其在不同土地类型下的比较 ..... 周 璞, 张旭东, 何 丹, 周金星, 王中建 (715)  
黄土丘陵沟壑区不同雨强下坡长对坡面土壤侵蚀的影响 .....
- ..... 陈晓安, 蔡强国, 张利超, 郑明国, 蔡俊渝, 李君兰 (721)  
河北献县表层土壤全氟空间变异性特征分析 ..... 李 阔, 王元杰, 刘会玲, 文宏达, 张毅功 (726)  
利用光谱技术分析北京地区农业土壤重金属光谱特征 ..... 李淑敏, 李 红, 孙丹峰, 周连第, 鲍 京 (730)  
特色果品种植区土壤重金属空间变异规律研究 .....
- 以河北省沧州为例 ..... 刘 宁, 雷玉平, 张圣微, 崔江慧, 张毅功 (736)  
泉州市 324 国道泉州至塘头段路旁土壤中重金属来源分析 ..... 赵 阳, 于瑞莲, 胡恭任, 张雪琴 (742)  
兰州市蔬菜基地蔬菜体内 Cu 污染及累积效应的研究 ..... 陶 玲, 任 琪, 乔国栋, 何宝珍 (747)  
污泥肥和生活垃圾肥对小麦—玉米重金属累积及产量的影响 .....
- ..... 康少杰, 刘善江, 邹国元, 孙 炜, 秦金生, 崔希龙, 桂 萌 (752)  
不同蔬菜对土壤 Cd, Pb 的累积能力研究 ..... 刘恩玲, 王 亮, 孙 继, 潘 秀 (758)
- ## 专题综述
- 我国南方红壤磷素研究概况 ..... 李 杰, 石元亮, 陈智文 (763)

# CHINESE JOURNAL OF SOIL SCIENCE

Vol.42 No.3 Jun., 2011

## CONTENTS

### Research Articles

#### Evaluation of Soil Quality in Yangtze River Estuary Area

--A Case Study of QiDong City ..... ZHANG Tong-juan, YANG Jin-song , LIU Guang-ming, Yang Qi-yong (513)

#### The Application of Projection Pursuit Grade Evaluation Model in the assessment for the Vertical Distributional Soil

Fertility Quality on East Slope of Mila Mountains District in Tibet .....

..... ZHONG Guo-hui, GUAN Fa-chun, HE Yan-guo (518)

#### Effects of Tourism Disturbance on Soil and Vegetation in Erlong Mountain Scenic Region .....

..... ZHANG Shu-hua, ZHAO Mei-wei, ZHANG Xue-ping (523)

#### Characteristics of Soil Freezing and Thawing in the North-western Plateau of Hebei .....

..... WANG Xin-lu, FENG Li-xiao, ZHAO Guasng-hui, ZHANG Li-feng (528)

#### Methods for Extracting Available Nickel in Black Soil .....

..... LIU Jin-hua, WANG Ya-qing, ZHOU Mi-ping, YANG Jing-min, YU Xiao-bin (534)

#### The Structure and Seasonal Changes of Soil Fauna Community in the Heptacodium miconioides Woodland at Different Altitudes in Tiantai Mountain in Zhejiang .....

..... BAI Yi, SHI Shi-di (539)

#### Diversity of Soil Fauna Community under Lime and EM Treatment .....

..... GAO Mei-Xiang, ZHANG Xue-Ping (545)

#### Studies on the Changes of Soil Microbial Communities under Peanuts Continuous Cropping .....

..... HUANG Yu-qian, HAN Xiao-ri, YANG Jin-feng, LIU Ning, LIU Xiao-hu (552)

#### The Study of Soil Microbial Diversity in Temperate Forest Secondary Succession Process .....

..... LOU Xin, CUI Xiao-yang (557)

#### Isolation and Identification of a High-Efficiency Alkane-Degrading Achromobacter insolitus XL Strain and Its Degradation Characteristics .....

..... SI Mei-ru, ZHAO Yun-feng, SU Tao (562)

#### Effect of Arbuscular Mycorrhizal Fungi (*Glomus Mosseae*) on Cd Accumulation in Maize Plants .....

..... LIU Ling-Zhi, ZHANG Yu-Long, LI Pei-Jun, GONG Zong-Qiang (568)

#### The effect of Fertilization Treatments on the Concentration of GRSP .....

..... DU Jie-fang, ZHANG Bin, XIE Hong-tu, WANG Lian-feng, HE Hong-bo, ZHANG Xu-dong (573)

#### Effects of Rotation and Microbial Fertilizers on the Properties of Continuous Cucumber Crippling Soil .....

..... WANG Tao, QIAO Wei-hua, LI Yu-qi, AO Yan-song (578)

#### Effects of Antagonistic Bacillus and Bio-organic Fertilizer on Controlling Cotton *Vorticillium* Wilt and Activity of Soil Enzyme .....

..... WANG Fei, LI Jun-hua, ZHAO Si-feng, SHEN Qi-rong, CHU Gui-xin, WEI Chang-zhou, GUO Yong-sheng (584)

#### Study on the Determination of Soil Methane Monoxygenase Activity .....

..... WANG Jing, XIA Fang-fang, WANG Wen-wei, HE Ruo, SHEN Dong-shen (589)

#### Spatial Variation Characteristics of Soil Total Nitrogen and Organic Matter in Ganzhou District of Zhangye Based on GIS and Geostatistics .....

..... YANG Dong, LIU Qiang (593)

#### Distribution Characteristics of Soil Nitrogen in Typical Depressional Wetlands of Sanjiang Plain .....

..... WANG Yang, LIU Jing-shuang, SUN Zhi-gao, DOU Jing-xin, ZHAO Guang-ying (598)

#### The Spatio-temporal Variability of Soil Available Nutrients in Summer Corn Growth Stage in Guanzhong .....

..... XU Hai, WANG Yi-quan, SHI Zong-lin, ZHANG Lu, LIU Jun, QIN Bao-jun, Hu Hai-yan (603)

#### Determination of Nitrogen and Phosphorus Rate in the Corn Field of Mollisol by Linear-Plateau Method .....

..... DU Dong-dong, ZHAO Jing-kao, XIAO Tong-yu, WEN Yan-chen, LI Sha (607)

#### Effect of Maize Seed Production Field in Different Planting Years on Soil Physical and Chemical Properties in Hexi Irrigation Area .....

..... ZHANG Hong-ju, ZHAO Huai-yong, QIN Jia-hai (612)

#### The research of Nitrogen Mineralization Rate of Different Hippophae rhamnoides Plantation .....

..... CHEN Jin-quan, ZHAO Zhong, LI Yu-xin (616)

#### Study on the Soil Adsorption Characteristics of Potassium, Magnesium, and Sulphur in Potash Magnesium Sulphate Fertilizer as Affected by Different Soil Types .....

..... HE Chun-me, WANG Fei, LIN Chen, LI Qing-hua, LI Yu, LIN Xin-jian (622)

#### The Correlations and Prediction models of Cation Exchange Capacity in Three Soils in Henan .....

..... ZHANG Shui-qing, HUANG Shao-min, GUO Dou-dou (627)

#### Comparison of Potassium Dissolved Rate for Organic-inorganic Complex Materials Cement and Coating Fertilizer in Different Soils .....

..... XIAO Qiang, WANG Jia-chen, ZUO Qiang, ZHANG Lin, ZOU Guo-yuan, ZHAO Tong-ke, LIU Bao-cun (632)

Study on Release Rule of Resin -Coated Controlled-release Fertilizer in Soil Based on SUGIHARA Model .....	CHEN Yan-hua, SUN Yan-xin, XUE Gao-feng, XIAO Qiang, ZHAO Ru-dong, JIAN Cui-fen (637)
The Effect of Urea Patch on Root Growth and Spatial Distribution of Wheat in the Seedling Stage .....	.. CHEN Huan, LIU Man-qiang, LI Xue-chao, YANG Jian-bo, XU Jing-jing, WANG Bin, HU Feng, LI Hui-xin (642)
Effects of Long-termed In-situ Fertilization on Wheat Rhizosphere Soil Nutrition in Chao Soil .....	..... JIE Xiao-lei, YANG Xian-ming, LIU Shi-liang, LIU Fang, HUA Dang-ling, LI Xue-jun, LI Zong-jun (648)
The effects of Long-term Fertilization on the Labile Organic Carbon and Carbon Management Index in Black Soil .....	ZHANG Di, HAN Xiao-Zeng, HOU Xue-ying (654)
Analysis on Change Trend of Soil Organic Carbon Stock During the Course of Urbanization .....	..... XU Nai-zheng, ZHANG Tao-lin, WANG Xing-xiang, LIU Hong-ying (659)
Short-term Effects of No-tillage on Soil Organic C and N and Available Nutrients in Black Soil of Northeast China .....	..... LI Wen-feng, LIANG Ai-zhen, ZHANG Xiao-ping, SHEN Yan, FAN Ru-qin, YANG Xue-ming (664)
Effects of Organic and Inorganic Fertilization on Alkali-phosphatase and Soil Phosphates on the Irrigated Farming Sierozem .....	..... LIU Shu-ying (670)
Residual Effects of Phosphate Fertilizer Applied to Winter Wheat on Following Maize and Transformation of Phosphate Fractions in Soil .....	..... LIN Guo-lin, YUN Peng, CHEN Lei, GAO Xiang, ZHANG Jin-tao, LU Chang-ai, LIU Rong-le, WANG Hong (676)
Effect of Different Fertilization Treatments on Phosphorus Utilization in Maize Rhizosphere Soil .....	..... LI Cui-lan, LI Zhi-hong, ZHANG Jin-jing, GAO Qiang (681)
Effect of Organic Acids on Phosphorus Adsorption Characteristic in Red Soil .....	..... WANG Yan-ling, ZHU Hong-xia, WANG Lin, HE Yuan-qiu (685)
Effects of Different Tillage and Fertilization on Chao soil Biological Characteristics .....	..... WEI Wei, LI Yun-sheng, DAI Chuan-chao, LI Pei-dong, OUYANG Zhu (692)
Effects of Long-term Fertilization on the Soil enzyme Activities and Soil Nutrients of the Black and Dark Brown Soils .....	..... JIAO Xiao-guang, WEI Dan, SUI Yue-yu (698)
The Effect of Seed Soaking with Manganese Sulfate on the Seedling Quality and Yield Formation of Potato .....	..... MA Guang-shu, HOU Li-hua, LIAN Hua, LIN Xiao-ying, WANG Yan-hong (704)
Effect of Subsoiling on Soil Water and Crop Yield in Semi-arid Area .....	..... XIAO Ji-bing, SUN Zhan-xiang, Yang Jiu-ting, ZHANG Yu-long, ZHENG Jia-ming, LIU Yang (709)
Spatial Variability of Soil Erodibility and its Comparison between Different Landuse Types of Small Watershed .....	..... ZHOU Jing, ZHANG Xu-dong, HE Dan, ZHOU Jin-xing, WANG Zhong-jian (715)
Slope Length on the Impact of Soil Erosion under different rainfall intensity in a Hilly Loess Region on the Loess Plateau .....	..... CHEN Xiao-an, CAI Qiang-guo, ZHANG Li-chao, ZHENG Ming-guo, QI Jun-yu, LI Junlan (721)
Study on Spatial Variability of Surface Soil Total Fluorine from Xianxian County in Hebei Province .....	..... LI Kuo, WANG Yuan-jie, LIU Hui-ling, WEN Hong-da, ZHANG Yi-gong (726)
Characteristic and Diagnostic Bands of Heavy Metals in Beijing Agricultural Soils Based on Spectroscopy .....	..... LI Shu-min, LI Hong, SUN Dan-feng, ZHOU Lian-di, BAO Jing (730)
Spatial Variability of Soil Heavy Metals in Characteristic Fruit Planting Area: a Case Study in Cangzhou .....	..... LIU Ning, LEI Yu-ping, ZHANG Sheng-wei, CUI Jiang-hui, ZHANG Yi-gong (736)
Multivariate Analysis Approach to Study the Source of Heavy Metals in Heavy Traffic Areas in the 324 National Highway Section of Quanzhou to TangTou .....	..... ZHAO Yang, YU Rui-lian, HU Gong-ren, ZHANG Xue-qin (742)
Research on Cu Pollution and the Cumulative Effect of Vegetables in Vegetable Base of Lanzhou City .....	..... TAO Ling, REN Jun, QIAO Guo-dong, HE Bao-zhen (747)
Effects of Sludge Fertilizer and Domestic Waste Fertilizer on Heavy Metal Accumulation and Yield of Wheat-corn .....	..... KANG Shao-jie, LIU Shan-jiang, ZOU Guo-yuan, SUN Hao, QIN Jin-sheng, CUI Xi-long, GUI Meng (752)
Uptake and Accumulation of Cd and Pb in Different Vegetables from Soil .....	..... LIU En-ling, WANG Liang, SUN Ji, PAN Xiu (758)
<b>Reviews and Comments</b>	
Research on Phosphorus in Southern Red Soils of Our Country .....	..... LI Jie, SHI Yuan-liang, CHEN Zhi-wen (763)