



中文核心期刊
中国科技核心期刊
中国科学引文数据库(CSCD)来源期刊
RCCSE中国核心学术期刊(A)
中国农林核心期刊

ISSN 2095-1191

CODEN NNXAAB

南方农业学报

Nanfang Nongye Xuebao

第53卷 第6期 2022年6月

Journal of Southern Agriculture

Vol.53 No.6 Jun. 2022

6

2022

广西壮族自治区农业科学院 主办

Sponsored by Guangxi Academy of Agricultural Sciences



科学出版社 出版
Published by Science Press

南方农业学报

Nanfang Nongye Xuebao

第53卷 第6期 2022年6月

目 次

优秀青年学者论坛

- 1483 黔北麻羊毛色差异主要调控基因及其通路分析
..... 孙宝盛, 张 颜, 肖贵榜, 杨玉能, 杨泓涛, 李世春, 邓位喜

专题:烟草科学

- 1493 烟草高亲和钾转运蛋白基因 *NtHAK5* 克隆及表达模式分析
..... 李晨依, 喻奇伟, 罗贞宝, 朱紫童, 康 俊, 贾宏昉
- 1502 云烟121健康与感黑胫病烟株根系及根际土壤丛枝菌根真菌差异研究
..... 裴 妍, 任 祯, 李秋桦, 陈 秀, 夏体渊, 蒋明星, 尹 敏
- 1513 耕作深度与翻压绿肥对植烟土壤细菌群落结构及多样性的影响
..... 祖韦军, 潘文杰, 薛亚军, 杨 磊, 林叶春
- 1525 烟草—荞麦轮作对烟草黑胫病防治及土壤微生态的调控作用
..... 孟祥佳, 刘 洋, 黎妍妍, 许汝冰, 李传仁, 周 焰, 孙正祥, 李锡宏
- 1536 基于灰色关联分析法的湖北烤烟还原糖含量与叶片形态特征关系研究
..... 刘晓敏, 位志坤, 王晓丽, 徐 锐, 韩 丹, 许自成
- 1543 雪茄烟马杜罗茄衣化学品质指数与中性香气物质的关系
..... 闫铁军, 丁 宁, 王 剑, 周 平, 刘利平, 潘 勇, 施友志, 王荣浩, 时向东
- 1552 有机肥和品种互作对土壤微生物群落及雪茄烟叶生长和产量的影响
..... 李 虹, 高华军, 吕洪坤, 林北森
- 1560 玫瑰黄链霉菌活性代谢产物诱导烟草灰霉病抗性机制研究
..... 刘海涛, 王 娇, 刘大群, 李亚宁
- 1568 一株具有烟草甲毒杀作用的苏云金芽孢杆菌对烟叶的影响
..... 胡逸超, 苏 赞, 雷 薇, 陈义昌, 邹克兴, 陈 琦, 邹承武
- 1577 烤烟蛙眼病病原菌的分离鉴定与生物学特性
..... 潘忠梅, 陈兴江, 孙光军, 何世芳, 陆 宁, 桑维钧, 曹 毅
- 1586 不同能源类型密集烤房烘烤性能与应用效果分析
..... 武圣江, 杨双剑, 黄 翔, 刘 琼, 刘明来, 李德仑, 韦克苏, 彭隆基, 杨 磊
- 1595 精秆堆沤还田对红壤烤烟农田生态系统磷素盈亏的影响
..... 吴 杉, 王克勤, 宋娅丽, 陈炳绅, 温昌焘, 裴益乐, 代 立
- 1604 烟草黑胫病拮抗细菌的分离、鉴定及发酵条件优化
..... 何明川, 施春兰, 魏聪聪, 曾舒泉, 兰明先, 唐 萍, 王志江, 伍显录, 陆光钰, 谢永辉
- 1616 不同采烤方式对烤烟上部叶脂质褐变的影响
..... 孙皓月, 贾宏昉, 谢良文, 冯长春, 伍德洋, 秦艳青, 陈汉发, 郭仕平

- 1625 烟秆炭基肥对烤烟生长和品质的影响 陈宇琳,童晨晓,吴凤英,何峰旋,周碧青,毛艳玲
- 1634 烟草叶斑病新病原分离鉴定及其生物学特性测定 杨江敏,桑维钧,孔 菲,李昊熙,卢燕回,顾恒锋,首安发,甘国喜,彭丽娟,杨茂发
- 1645 烟草附球菌叶斑病的病原及生物学特性 何世芳,孙光军,曾陨涛,潘忠梅,陈兴江,桑维钧,曹 毅

园艺·园林·林业

- 1654 梭梭 *HaNAC12* 转录因子抗逆功能验证 穆榕博,张 桦,周亮第,刘 豪,姚正培,任燕萍,王 波,马 丽,杨文艳
- 1666 富硒芽孢杆菌对赤红壤硒转化及菜心硒吸收累积的影响 廖 青,邢 颖,梁潘霞,潘丽萍,黄太庆,陈锦平,江泽普,刘永贤
- 1674 贞丰野生茶树叶表特征及解剖结构分析 李美凤,彭 叶,温贝贝,刘 元,刘建军
- 1685 野鸦椿和圆齿野鸦椿对低温胁迫的生理响应及抗寒性评价 刘 聰,陆思羽,涂淑萍,姜雪茹
- 1693 生姜种质资源主要农艺性状的遗传多样性分析 李德文,王少铭,李晋华,罗莉斯,冷家归,侯颖辉
- 1704 设施土壤灭菌与摩西球囊霉对黄瓜幼苗生长及养分吸收的影响 樊娅萍,宋柏权,陈芳玲,贺苗苗,王倡宪

畜牧·兽医·水产·蚕桑

- 1713 瑶山亚种树鼩 IFN- β 和 IFN- γ 原核表达及其多克隆抗体制备 曹颖颖,李宝莹,王 婷,梁 亮,运晨霞,唐海波,冷 静
- 1724 2个品种山羊瘤胃菌群结构比较及其功能预测分析 张 瑜,张叁保,申玉建,胡 艳,高小童,韦英明,蒋钦杨
- 1734 新型阿卡班病毒 SYBR Green I 荧光定量 RT-PCR 建立及广西边境地区蚊携带新型阿卡班病毒调查 马 玲,孟 菲,陆晨阳,陈赫威,蔡 畅,秦树英,覃绍敏,刘金凤,陈凤莲,吴健敏
- 1742 长江如皋江段仔稚鱼资源现状调查分析 王小豪,方弟安,孙海博,何 苗,薛向平
- 1752 F_3 代波杂山羊 *XKR4* 基因多态性与生长性状的关联分析 阮 涌,陈 祥,田贵刚,安冬伟,邹启顺
- 1759 不同木薯叶营养成分对饲养木薯蚕的影响 曹萌萌,杨 龙,陈松笔,安飞飞
- 1768 Na^+ 、 K^+ 、pH 及 3 种单糖对湖拟鲤精子活力的综合调控 张 齐,李胜忠,邱奕树,刘长龙

农业信息技术·农业经济

- 1776 全球水稻生产时空变化特征及贸易趋势分析 姚 伟,佟越强,刘 棋,臧华栋,杨亚东,戚志强,曾昭海

Journal of Southern Agriculture

Vol.53 No.6, 2022

Contents

Outstanding Young Scholars Forum

- 1483 Main wool color regulatory genes of *Capra hircus* and analysis of their pathways
..... SUN Bao-sheng, ZHANG Yan, XIAO Gui-bang, YANG Yu-neng, YANG Hong-tao, LI Shi-chun, DENG Wei-xi

Special Subject: Tobacco Sciences

- 1493 Cloning and expression pattern analysis of high-affinity potassium transporter gene *NtHAK5* in tobacco
..... LI Chen-yi, YU Qi-wei, LUO Zhen-bao, ZHU Zi-tong, KANG Jun, JIA Hong-fang
- 1502 Study on arbuscular mycorrhizal fungi difference in roots and rhizosphere soil in healthy and black shank infected tobacco Yunyan 121 PEI Yan, REN Zhen, LI Qiu-hua, CHEN Xiu, XIA Ti-yuan, JIANG Ming-xing, YIN Min
- 1513 Effects of tillage depths and green manure overturning on microbial community structure and diversity of tobacco-planting soil ZU Wei-jun, PAN Wen-jie, XUE Ya-jun, YANG Lei, LIN Ye-chun
- 1525 Effects of tobacco-buckwheat rotation on regulation of tobacco black shank prevention and control and soil microenvironment MENG Xiang-jia, LIU Yang, LI Yan-yan, XU Ru-bing, LI Chuan-ren, ZHOU Yi, SUN Zheng-xiang, LI Xi-hong
- 1536 Study on relationship between reducing sugar content and leaf morphological characteristics of flue-cured tobacco in Hubei Province based on grey correlation analysis
..... LIU Xiao-min, WEI Zhi-kun, WANG Xiao-li, XU Rui, HAN Dan, XU Zi-cheng
- 1543 Relationship between chemical quality index and neutral aroma substances of Maduro wrapper
..... YAN Tie-jun, DING Ning, WANG Jian, ZHOU Ping, LIU Li-ping, PAN Yong, SHI You-zhi, WANG Rong-hao, SHI Xiang-dong
- 1552 Interactions of organic fertilizers and varieties on soil microbial communities and cigar tobacco leaf growth and yield
..... LI Hong, GAO Hua-jun, LYU Hong-kun, LIN Bei-sen
- 1560 Mechanism of resistance to tobacco gray mold induced by the active metabolite of *Streptomyces roseoflavus*
..... LIU Hai-tao, WANG Jiao, LIU Da-qun, LI Ya-ning
- 1568 Effects of *Bacillus thuringiensis* with toxics for *Lasioderma serricorne* on tobacco leaves
..... HU Yi-chao, SU Zan, LEI Wei, CHEN Yi-chang, ZOU Ke-xing, CHEN Qi, ZOU Cheng-wu
- 1577 Isolation, identification and biological characteristics of pathogens causing frog eye disease in flue-cured tobacco
..... PAN Zhong-mei, CHEN Xing-jiang, SUN Guang-jun, HE Shi-fang, LU Ning, SANG Wei-jun, CAO Yi
- 1586 Analysis of curing performance and application effect of bulk curing barns using different types of energy
..... WU Sheng-jiang, YANG Shuang-jian, HUANG Xiang, LIU Qiong, LIU Ming-lai, LI De-lun, WEI Ke-su, PENG Long-ji, YANG Lei
- 1595 Effects of straw compost retting on phosphorus balance of flue-cured tobacco farmland ecosystem in red soil
..... WU Shan, WANG Ke-qin, SONG Ya-li, CHEN Bing-shen, WEN Chang-tao, PEI Yi-le, DAI Li
- 1604 Isolation, identification and optimization of fermentation conditions of antagonistic bacteria against tobacco black shank
..... HE Ming-chuan, SHI Chun-lan, WEI Cong-cong, ZENG Shu-quan, LAN Ming-xian, TANG Ping, WANG Zhi-jiang, WU Xian-lu, LU Guang-yu, XIE Yong-hui
- 1616 Effects of different harvesting and baking methods on lipid browning of upper leaves of flue-cured tobacco
..... SUN Hao-yue, JIA Hong-fang, XIE Liang-wen, FENG Chang-chun, WU De-yang, QIN Yan-qing, CHEN Han-fa, GUO Shi-ping
- 1625 Effects of tobacco stem biochar-based fertilizer on growth and quality of flue-cured tobacco
..... CHEN Yu-lin, TONG Chen-xiao, WU Feng-ying, HE Zheng-xuan, ZHOU Bi-qing, MAO Yan-ling

- 1634 Isolation, identification and biological characteristics of a new pathogen of tobacco leaf spot YANG Jiang-min, SANG Wei-jun, KONG Fei, LI Hao-xi, LU Yan-hui, GU Heng-feng, SHOU An-fa, GAN Guo-xi, PENG Li-juan, YANG Mao-fa
- 1645 Pathogen and biological characteristics of tobacco *Epicoccus* leaf spot HE Shi-fang, SUN Guang-jun, ZENG Yun-tao, PAN Zhong-mei, CHEN Xing-jiang, SANG Wei-jun, CAO Yi

Horticulture · Landscape Architecture · Forestry

- 1654 Stress-resistance functional validation of transcription factor *HaNAC12* of *Haloxylon ammodendron* MU Rong-bo, ZHANG Hua, ZHOU Liang-di, LIU Hao, YAO Zheng-pei, REN Yan-ping, WANG Bo, MA Li, YANG Wen-yan
- 1666 Effects of selenium-rich bacillus on selenium transformation in lateritic red soil and selenium absorption and accumulation in Chinese flowering cabbage LIAO Qing, XING Ying, LIANG Pan-xia, PAN Li-ping, HUANG Tai-qing, CHEN Jin-ping, JIANG Ze-pu, LIU Yong-xian
- 1674 Leaf surface characteristics and anatomical structure analysis of Zhenfeng wild tea trees LI Mei-feng, PENG Ye, WEN Bei-bei, LIU Yuan, LIU Jian-jun
- 1685 Physiological response and cold-resistance evaluation of *Euscaphis japonica* and *Euscaphis konishii* under low temperature stress LIU Cong, LU Si-yu, TU Shu-ping, JIANG Xue-ru
- 1693 Genetic diversity analysis of major agronomic traits of ginger germplasm resources LI De-wen, WANG Shao-ming, LI Jin-hua, LUO Li-si, LENG Jia-gui, HOU Ying-hui
- 1704 Effects of greenhouse soil sterilization and *Glomus mosseae* on growth and nutrients absorption of cucumber (*Cucumis sativus* L.) seedlings FAN Ya-ping, SONG Bai-quan, CHEN Fang-ling, HE Miao-miao, WANG Chang-xian

Animal Science · Veterinary Science · Aquaculture · Sericulture

- 1713 Prokaryotic expression and polyclonal antibody preparation of IFN- β and IFN- γ of *Tupaia belangeri yaoshanensis* CAO Ying-ying, LI Bao-ying, WANG Ting, LIANG Liang, YUN Chen-xia, TANG Hai-bo, LENG Jing
- 1724 Rumen microbial community structure comparison and function prediction of two goat breeds ZHANG Yu, ZHANG San-bao, SHEN Yu-jian, HU Yan, GAO Xiao-tong, WEI Ying-ming, JIANG Qin-yang
- 1734 Development of qRT-PCR based on novel Akabane virus SYBR Green I and survey on novel Akabane virus carried by mosquitoes in border areas of Guangxi MA Ling, MENG Fei, LU Chen-yang, CHEN He-wei, CAI Chang, QIN Shu-ying, QIN Shao-min, LIU Jin-feng, CHEN Feng-lian, WU Jian-min
- 1742 Status quo of fish larva resources in Rugao section of Yangtze River WANG Xiao-hao, FANG Di-an, SUN Hai-bo, HE Miao, XUE Xiang-ping
- 1752 Correlation analysis of *XKR4* gene polymorphism and growth traits in F₃ generation Boza goats RUAN Yong, CHEN Xiang, TIAN Gui-gang, AN Dong-wei, ZOU Qi-shun
- 1759 Effects of cassava leaves' nutrient components on eri-silkworm breeding CAO Meng-meng, YANG Long, CHEN Song-bi, AN Fei-fei
- 1768 Comprehensive regulation of sperm motility of *Rutilus rutilus lacustris* by Na⁺, K⁺, pH, and 3 monosaccharides ZHANG Qi, LI Sheng-zhong, QIU Yi-shu, LIU Chang-long

Agricultural Information Technology · Agriculture Economics

- 1776 Spatiotemporal change characteristics and trade trend of global rice production YAO Wei, TONG Yue-qiang, LIU Qi, ZANG Hua-dong, YANG Ya-dong, QI Zhi-qiang, ZENG Zhao-hai