



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

ISSN 1000-4440
CN 32-1213/S

江苏农业学报

Jiangsu Journal of Agricultural Sciences

第39卷 第1期

Vol. 39 No.1

2023年2月

江苏省农业科学院主办

ISSN 1000-4440



9 771000 444231



江苏农业学报

第39卷 第1期 2023年2月28日

目 次

遗传育种·生理生化

镇麦品种相关品质性状基因的分子标记检测分析

..... 郭 瑞 姚维成 陈 琛 曲朝喜 温明星 刘家俊 邓 壢 申雪懿 李东升 (1)

低温胁迫下甘蓝型冬油菜抗寒性与叶片激素含量的关联性

..... 范军强 路晓明 王会文 武军艳 刘丽君 马 骊 蒲媛媛 李学才 孙万仓 (15)

菜用甘薯产量稳定性及试验点鉴别力综合分析

..... 戴习彬 王 远 周志林 肖世卓 赵凌霄 王 洁 王 瑛 李青莲 朱国鹏 曹清河 (22)

植物保护

灰飞虱唾液鞘形态及其蛋白质组分鉴定 戚良轩 徐晴玉 李 晶 鞠佳菲 孙 洋 方继朝 纪 锐 (30)

利用小RNA深度测序技术鉴定江苏盐城辣椒病毒种类 赵小慧 刘 冲 郁 凯 钟明媚 郑佳秋 邢锦城 (37)

不同地域草莓拟盘多毛孢根腐病菌致病力差异及对苯醚甲环唑的敏感性

..... 吴娥娇 郭文龙 王志伟 关 玲 乔玉山 赵密珍 (44)

水稻对三种常用农药的吸收及转运

..... 刘嘉楠 程金金 孙 星 周春丽 闫小龙 耿韧华 王冬兰 万 群 余向阳 (53)

耕作栽培·资源环境

不同砂滤料暗管排水对水稻生长及土壤盐分的影响 刘嘉斌 田军仓 杨振峰 李丹丹 (65)

基于时序聚类的河南省冬小麦单产演变区域差异及其对气候干湿变化的响应 黄 进 王锦旗 张方敏 (73)

添加秸秆碳源对沟渠水体中氮素去除及温室气体排放的影响

..... 舒 同 周贝贝 段婧婧 马如龙 薛利祥 何世颖 薛利红 杨林章 (81)

村镇有机生活垃圾处理产物对青菜品质及土壤性质的影响

..... 张 亚 师杨杰 姚均伟 郝大洋 张 衡 曹风雷 朱 宁 李 游 斯红梅 (88)

双氧水协同凤眼莲去除富营养化水体中高浓度蓝藻的效果

..... 孙维民 秦红杰 张志勇 张迎颖 陈金峰 姜智绘 宋雪飞 (97)

大蒜内生巨大芽孢杆菌对邻苯二甲酸酯的共代谢降解特性及代谢途径分析

..... 肖霞霞 杨 云 马丽雅 冯发运 葛 静 李 勇 王 亚 余向阳 马桂珍 (106)

农业信息工程

基于连续小波变换的表层土壤有机碳含量的高光谱估算 江远东 李新国 杨 涵 (118)

畜牧兽医·水产养殖

菌酶协同异步发酵中草药对断奶仔猪生长、腹泻、免疫和抗氧化性能的影响

..... 姜政宏 葛金山 程金龙 彭宇晗 姜淑贞 朱元召(126)

血清 4 型禽腺病毒 *TaqMan* 探针实时荧光定量 PCR 检测方法的建立与应用

..... 吴 双 张 聪 袁慧莎 戴利霞 林梦舟 吴 植 朱善元(134)

枯草芽孢杆菌和粪肠球菌对鲫鱼生长性能、血清学指标和肠道微生物多样性的影响

..... 何 琴 王 利 段荟芹 苟小兰(142)

园 艺

辣椒 DREB 转录因子鉴定及其在涝害胁迫下的表达分析

..... 郑佳秋 王薇薇 梅 粦 吴永成 万红建 潘宝贵 尤 春 刘 哲 沈 峰 冯汝超(148)

基于分期播种法的冬季塑料大棚 5 种叶菜生育特性及产量效益分析 黄嘉俊 张亚红 周 娟 葛 静(160)

大蒜热激转录因子基因 *AsHSFB1* 的克隆、亚细胞定位及其表达分析

..... 杨青青 杨 峰 赵永强 陆信娟 刘灿玉 葛 洁 张碧薇 樊继德(169)

桃内酯芳香物质合成相关的环氧化物水解酶候选基因的鉴别 张圆圆 刘文敬 张斌斌 马瑞娟 俞明亮(178)

葡萄品种钟山红玉与钟山红杂交后代的 SSR 鉴定及葡萄果实性状遗传倾向分析

..... 高 磊 李 慧 洪 奔 郑 焕 陶建敏(187)

不同试剂处理对草莓植株生长及根际微生物群落结构的影响

..... 朱 丽 王庆莲 唐山远 乔玉山 顾闽峰 费月跃 王伟义 陈晓东 赵密珍(198)

紫色土中氮肥、磷肥、钾肥配施对白芷产量及有效成分的影响

..... 刘仁浪 蒋翼杰 江美彦 陈靳松 肖婕妤 郑全林 吴 卫(208)

加工贮藏·质量安全

采后流通温度对精品包装苏州青感官及内在品质的影响 马佳佳 孙灵湘 黄桂丽 全鑫瑶 隋思瑶 王毓宁(218)

超声波辅助提取黄粉虫中黄酮类物质的工艺优化及黄酮类物质的稳定性

..... 杨盛茹 侯银臣 张秋双 潘春梅 李亚博 田腴澍 韩檀楚(229)

福林酚比色法测定海藻多酚的反应条件优化 杨春妹 李志明 范先婷 沈 宏(238)

流形学习在红松籽仁蛋白质含量近红外检测中的应用 仇逊超 张春越 张怡卓 曹 军(246)

综 述

高温胁迫导致水稻颖花败育的机理及其防御措施研究进展

..... 徐 鹏 贺一哲 尤翠翠 黄亚茹 何海兵 柯 健 武立权(255)

芽孢杆菌嗜铁素研究进展 刘邮洲 沈佳慧 乔俊卿 左 杨 刘永锋(266)

水环境中微塑料的分布迁移特征及生态危害研究进展

..... 邢锦城 何苏南 洪立洲 刘 冲 董 静 朱小梅 陈环宇 王 凯 郁 凯 孙果丽 张振华(277)

辣椒碱对动物肠道功能和肠道菌群的影响及其缓解肠道炎症的研究进展 从光雷 夏双双 刘春雪 洪 平(287)

秋水仙碱提取分离研究进展 崔光芬 杜文文 金鹏程 段 青 王祥宁 贾文杰 马璐琳 王继华(295)

JIANGSU JOURNAL OF AGRICULTURAL SCIENCES

Vol.39 No.1 February 28 2023

CONTENTS

CROP GENETICS AND BREEDING · PHYSIOLOGY AND BIOCHEMISTRY

- Analysis of molecular markers detection for genes related to quality traits in Zhenmai wheat cultivars GUO Rui, YAO Wei-cheng, CHEN Chen, QU Chao-xi, WEN Ming-xing, LIU Jia-jun, DENG Yao, SHEN Xue-yi, LI Dong-sheng (1)
- Association between cold resistance and leaf hormone content of *Brassica napus* L. under low temperature stress FAN Jun-qiang, LU Xiao-ming, WANG Hui-wen, WU Jun-yan, LIU Li-jun, MA Li, PU Yuan-yuan, LI Xue-cai, SUN Wan-cang (15)
- Comprehensive analysis of yield stability and testing sites discrimination of leaf-vegetable sweetpotato varieties DAI Xi-bin, WANG Yuan, ZHOU Zhi-lin, XIAO Shi-zhuo, ZHAO Ling-xiao, WANG Jie, WANG Yao, LI Qing-lian, ZHU Guo-peng, CAO Qing-he (22)

PLANT PROTECTION

- Morphology and protein identification of salivary sheath from *Laodelphax striatellus* QI Liang-xuan, XU Qing-yu, LI Jing, JU Jia-fei, SUN Yang, FANG Ji-chao, JI Rui (30)
- Identification of viruses from peppers in Yancheng, Jiangsu province by small RNA deep sequencing ZHAO Xiao-hui, LIU Chong, YU Kai, ZHONG Ming-juan, ZHENG Jia-qiu, XING Jin-cheng (37)
- Virulence difference and sensitivity analysis to difenoconazole of *Neopestalotiopsis clavigpora* crown rot pathogens isolated from strawberry plants of different areas in China WU E-jiao, GUO Wen-long, WANG Zhi-wei, GUAN Ling, QIAO Yu-shan, ZHAO Mi-zhen (44)
- Absorption and transport of three commonly used pesticides in rice LIU Jia-nan, CHENG Jin-jin, SUN Xing, ZHOU Chun-li, YAN Xiao-long, GENG Ren-hua, WANG Dong-lan, WAN Qun, YU Xiang-yang (53)

FARMING AND CULTIVATION · RESOURCE AND ENVIRONMENT

- Effects of subsurface drainage with different sand filters on rice growth and soil salinity LIU Jia-bin, TIAN Jun-cang, YANG Zhen-feng, LI Dan-dan (65)
- Region difference of yield variability of winter wheat in Henan province based on temporal clustering and its response to climatic dry and wet variations HUANG Jin, WANG Jin-qi, ZHANG Fang-min (73)
- Changes of nitrogen removal and greenhouse gas emission in ditch water with straw carbon source SHU Tong, ZHOU Bei-bei, DUAN Jing-jing, MA Ru-long, XUE Li-xiang, HE Shi-ying, XUE Li-hong, YANG Lin-zhang (81)
- Effects of the products from treatment of organic domestic waste in villages and towns on the quality of *Brassica chinensis* and soil properties ZHANG Ya, SHI Yang-jie, YAO Jun-wei, HAO Da-yang, ZHANG Heng, CAO Feng-lei, ZHU Ning, LI You, JIN Hong-me (88)
- Effect of hydrogen peroxide combined with *Eichhornia crassipes* on removal of high concentration cyanobacteria in eutrophic water SUN Wei-min, QIN Hong-jie, ZHANG Zhi-yong, ZHANG Ying-ying, CHEN Jin-feng, JIANG Zhi-hui, SONG Xue-fei (97)
- Co-metabolic degradation characteristics and metabolic pathways analysis of phthalic acid esters by endophytic *Bacillus megaterium* in garlic XIAO Xia-xia, YANG Yun, MA Li-ya, FENG Fa-yun, GE Jing, LI Yong, WANG Ya, YU Xiang-yang, MA Gui-zhen (106)

AGRICULTURAL INFORMATION ENGINEERING

- Hyperspectral estimation of organic carbon content in surface soils based on continuous wavelet transform JIANG Yuan-dong, LI Xin-guo, YANG Han (118)

ANIMAL HUSBANDRY AND VETERINARY SCIENCES · AQUICULTURE

- Effects of bacteria-enzymes synergistic asynchronous fermentation of Chinese herbal medicine on growth, diarrhea, immunity and antioxidant of weaned piglets JIANG Mei-hong, GE Jin-shan, CHENG Jin-long, PENG Yu-han, JIANG Shu-zhen, ZHU Yuan-zhao(126)
- Establishment and application of quantitative real-time PCR detection method for fowl aviadenovirus serotype 4 based on *TaqMan* probe WU Shuang, ZHANG Cong, YUAN Hui-sha, DAI Li-xia, LIN Meng-zhou, WU Zhi, ZHU Shan-yuan(134)
- Effects of *Bacillus subtilis* and *Enterococcus faecalis* on growth performance, serum biochemical indices and intestinal microflora of *Carassius auratus* HE Qin, WANG Li, DUAN Hui-qin, GOU Xiao-lan(142)

HORTICULTURE

- Identification of DREB transcription factor in pepper and expression analysis of *DREB* gene under waterlogging stresses ZHENG Jia-qiu, WANG Wei-wei, MEI Yi, WU Yong-cheng, WAN Hong-jian, PAN Bao-gui, YOU Chun, LIU Zhe, SHEN Feng, FENG Ru-chao(148)
- Analysis of growth characteristics, yield and economic benefits of five kinds of leaf vegetables in winter plastic greenhouse based on staged sowing HUANG Jia-jun, ZHANG Ya-hong, ZHOU Juan, GE Jing(160)
- Cloning, subcellular localization and expression analysis of garlic heat shock transcription factor gene *AsHSFB1* YANG Qing-qing, YANG Feng, ZHAO Yong-qiang, LU Xin-juan, LIU Can-yu, GE Jie, ZHANG Bi-wei, FAN Ji-de(169)
- Identification of candidate epoxide hydrolase genes involved in the biosynthesis of lactone volatile compounds in peach (*Prunus persica* L.) ZHANG Yuan-yuan, LIU Wen-jing, ZHANG Bin-bin, MA Rui-juan, YU Ming-liang(178)
- SSR identification and genetic tendency analysis of fruit characters of hybrid offspring of Zhongshan Hongyu and Zhongshan Hong GAO Lei, LI Hui, HONG Ben, ZHENG Huan, TAO Jian-min(187)
- Effects of different reagent treatments on strawberry plant growth and rhizosphere microbial community structure ZHU Li, WANG Qing-lian, TANG Shan-yuan, QIAO Yu-shan, GU Min-feng, FEI Yue-yue, WANG Wei-ji, CHEN Xiao-dong, ZHAO Mi-zhen(198)
- Effects of combined application of nitrogen fertilizer, phosphorus fertilizer and potassium fertilizer on yield and active components of *Angelica dahurica* in purple soil LIU Ren-lang, JIANG Yi-jie, JIANG Mei-yan, CHEN Jin-song, XIAO Jie-yu, ZHENG Quan-lin, WU Wei(208)

PROCESSING AND STORAGE · QUALITY SAFETY

- Effect of postharvest circulation temperature on sensory and internal qualities of boutique packaging pakchoi MA Jia-jia, SUN Ling-xiang, HUANG Gui-li, QUAN Xin-yao, SUI Si-yao, WANG Yu-ning(218)
- Study on optimization of ultrasonic assisted extraction process and stability of flavonoids from *Tenebrio molitor* YANG Sheng-ru, HOU Yin-chen, ZHANG Qiu-shuang, PAN Chun-mei, LI Ya-bo, TIAN Yu-shu, HAN Tan-chu(229)
- Study on determination conditions of seaweed polyphenols by Folin-Ciocalteu colorimetry YANG Chun-mei, LI Zhi-ming, FAN Xian-ting, SHEN Hong(238)
- Application of manifold learning in quantitative detection of protein in Korean pine seed kernels using near-infrared quantitative detection QIU Xun-chao, ZHANG Chun-yue, ZHANG Yi-zhuo, CAO Jun(246)

REVIEW

- Research progress on the mechanism and defense measures of rice spikelet abortion caused by high temperature stress XU Peng, HE Yi-zhe, YOU Cui-cui, HUANG Ya-ru, HE Hai-bing, KE Jian, WU Li-quan(255)
- Research progress of siderophore produced by *Bacillus* spp. LIU You-zhou, SHEN Jia-hui, QIAO Jun-qing, ZUO Yang, LIU Yong-feng(266)
- Research progress on distribution and migration characteristics and ecological hazards of microplastics in water environment XING Jin-cheng, HE Su-nan, HONG Li-zhou, LIU Chong, DONG Jing, ZHU Xiao-mei, CHEN Huan-yu, WANG Kai, YU Kai, SUN Guo-li, ZHANG Zhen-hua(277)
- Research progress of the effect of capsaicin on animal intestinal function and intestinal microflora and its relieving effect on intestinal inflammation CONG Guang-lei, XIA Shuang-shuang, LIU Chun-xue, HONG Ping(287)
- Advances in extraction and separation of colchicine CUI Guang-fen, DU Wen-wen, JIN Peng-cheng, DUAN Qing, WANG Xiang-ning, JIA Wen-jie, MA Lu-lin, WANG Ji-hua(295)