

湖南农业大学学报
(自然科学版)
Journal of Hunan
Agricultural University
(Natural Sciences)

第 49 卷第 4 期
(总第 277 期)
2023 年 8 月

第十届编辑委员会

学术顾问: 官春云 印遇龙

主 任: 邹学校

副 主 任: 刘仲华 段美娟
陈光辉

委 员 (按姓氏拼音排序):

柏连阳 曹福祥 陈光辉
陈信波 邓子牛 段美娟
方 俊 方 远 甘德欣
贺建华 贺 喜 侯德兴
纪雄辉 李有志 林亲录
刘 霞 刘忠松 刘仲华
卢向阳 罗 琳 单 杨
沈文辉 苏爱华 孙志良
谭支良 唐文帮 王国梁
王 辉 王克林 吴明亮
吴卫国 肖调义 萧浪涛
谢方平 熊兴耀 徐明岗
杨国顺 易自力 郑晓峰
朱幸辉 邹冬生 邹学校

主 编 苏爱华

副 主 编 罗慧敏

毛友纯

执行编辑 罗慧敏

电脑编辑 刘佳宁

目 次

作物学

水稻光合色素含量的变异分析及 QTL 定位.....胡超, 刘玲, 熊佳铭, 袁红亮, 于玉凤, 王悦(383)
不同品种玉米镉的积累特性.....武清贵, 田丰, 郑冉, 吕丹, 刘松芹, 罗红兵(389)

烟草科学

滞库片烟长期存放过程中主要化学成分的变化.....
马一琼, 李悦, 崔廷, 白银帅, 刘向真, 赵森森, 牛洋洋, 刘超, 贾国涛, 程良琨(395)
云南德宏雪茄烟植烟土壤养分的适宜性评价.....
贺晓辉, 郭东锋, 纵坤, 周锦龙, 沈俊儒, 唐旭兵, 时雅琪, 丁乃红, 甄安忠, 张洋(400)
基于机器视觉的烤烟烟叶部位的智能识别.....
赵晨, 王涛, 郭伟雄, 孙光伟, 路晓崇, 宋朝鹏, 陈振国(405)

生物科学与技术

不同菌根类型植物生物量分配对干旱的响应.....
王晓辉, 石兆勇, 张梦歌, 杨爽, 张梦汉(412)
基于酿酒酵母的多片段质粒的构建.....
汤雅萍, 程毅, 王吐虹, 陈佳, 高春生, 郭利桃, 宋志强, 唐超, 严准, 李智敏(421)
铁氧化菌菌株 EEELCW01 的基因组分析及砷转化功能.....
熊潇然, 邹奇, 吴川, 夏礼兵, 潘炜松(428)

园艺·园林

鲜食青椒果实的品质性状分析与评价.....向家勇, 杨莎,
梁成亮, 陈文超, 李雪峰, 欧立军, 戴雄泽, 马艳青, 邹学校, 张竹青(436)

植物保护

辣椒疫霉病菌拮抗菌的筛选鉴定及生防潜力.....
郑迪文, 周游, 谢芳玲, 谢宗宝, 刘峰, 朱宏建(442)
深圳危害榕属植物的舞蛾科害虫的发生及鉴定.....陈晓琴, 李平东,
杨蕉旭, 温凯, 张萌娜, 郑小玲, 阮用颖, 岳鑫璐, 江民宝, 殷祥语, 孟子烨(448)

畜牧·兽医·水产

广益黑猪繁殖性状的全基因组关联分析.....朱吉, 任慧波, 吴发平,
崔清明, 刘莹莹, 邓缘, 李华丽, 胡雄贵, 左剑波, 邹亿文, 陈晨, 彭英林(453)
牛卵泡颗粒细胞 CART 与候选受体的分子对接及其功能.....
郝琴琴, 任静, 成俊丽, 朱芷葳, 许冬梅, 贾雪纯, 李鹏飞(461)
利用 CRISPR/Cas9 技术构建猪的 LDLR 基因敲除细胞.....
韩佃刚, 胡娟, 董俊, 周思佳, 陈朝林, 张家翔, 信吉阁(468)
肉桂醛对耐药性肺炎克雷伯菌的抑菌活性及其机制.....
唐廷, 杜娟, 周小仙, 赵素梅, 王涛, 蒋奇滨, 尹立于(472)
芍药苷对 UVB 诱导的小鼠色素沉着的改善与调控机制研究.....
刘晓英, 韩萍, 太美灵, 吴诗颖, 杜志云(479)
基于 Cyt b 序列分析黄沙鳖和日本鳖及其杂交子一代的遗传多样性.....
肖何威, 胡亚洲, 秦湊, 徐大建, 梁艺馨, 刘小燕, 王晓清(486)

农业工程

基于改进 YOLOv5s 模型的山地果园单轨运输机搭载柑橘的检测.....
周岳淮, 李震, 左嘉明, 龚琬蓉, 吕石磊, 温威, 黄莺(491)
基于可见/近红外光谱的柑橘糖度在线检测分选系统的设计与试验.....
刘豪, 龚中良, 文韬, 王志宇, 代兴勇(497)

CONTENTS

Crop Science

- Analysis of variation and QTL mapping for photosynthetic pigment content in rice.....
HU Chao, LIU Ling, XIONG Jiaming, YUAN Hongliang, YU Yufeng, WANG Yue (383)
- Cadmium accumulation characteristics in different maize varieties.....
WU Qinggui, TIAN Feng, ZHENG Ran, LYU Dan, LIU Songqin, LUO Hongbing (389)

Tobacco Science

- Research on the change of main chemical components in aged flue-cured tobacco lamina during long-term storage.....MA Yiqiong,
 LI Yue, CUI Ting, BAI Yinshuai, LIU Xiangzhen, ZHAO Sensen, NIU Yangyang, LIU Chao, JIA Guotao, CHENG Liangkun (395)
- Soil nutrients suitability evaluation for cigar tobacco producing areas in Dehong of Yunnan based on Dehong of Yunnan.....HE Xiaohui,
 GUO Dongfeng, ZONG Kun, ZHOU Jinlong, SHEN Junru, TANG Xubing, SHI Yaqi, DING Naihong, ZHEN Anzhong, ZHANG Yang (400)
- Intelligent recognition of flue-cured tobacco position based on machine vision.....
ZHAO Chen, WANG Tao, GUO Weixiong, SUN Guangwei, LU Xiaochong, SONG Zhaopeng, CHEN Zhengguo (405)

Bioscience and Biotechnology

- Drought-induced biomass allocation responses in different types of mycorrhizal plants.....
WANG Xiaohui, SHI Zhaoyong, ZHANG Mengge, YANG Shuang, ZHANG Menghan (412)
- Construction of multi-fragments plasmid based on *Saccharomyces cerevisiae*.....TANG Yaping,
 CHENG Yi, WANG Tuhong, CHEN Jia, GAO Chunsheng, GUO Litao, SONG Zhiqiang, TANG Chao, YAN Zhun, LI Zhimin (421)
- Genomic analysis and arsenic transformation of iron-oxidizing strain EELCW01.....
XIONG Xiaoran, ZOU Qi, WU Chuan, XIA Libin, PAN Weisong (428)

Horticulture ·Landscape

- Analysis and evaluation of fruit quality traits in fresh green pepper.....XIANG Jiayong, YANG Sha,
 LIANG Chengliang, CHEN Wenchao, LI Xuefeng, OU Lijun, DAI Xiongze, MA Yanqing, ZOU Xuexiao, ZHANG Zhuqing (436)

Plant Protection

- Screening and identification of antagonistic strain against *Phytophthora capsici* and the biocontrol potential.....
ZHENG Diwen, ZHOU You, XIE Fangling, XIE Zongbao, LIU Feng, ZHU Hongjian (442)
- Occurrence and identification of a Choreutidae pest on *Ficus* L. in Shenzhen.....CHEN Xiaoqin, LI Pingdong, YANG Jiangxu,
 WEN Kai, ZHANG Mengna, ZHENG Xiaoling, RUAN Yongying, YUE Xinlu, JIANG Minbao, YIN Xiangyu, MENG Ziyi (448)

Animal ·Veterinary ·Aquatic

- Genome-wide association study of reproductive traits in Guangyi black pigs.....ZHU Ji, REN Huibo, WU Faping,
 CUI Qingming, LIU Yingying, DENG Yuan, LI Huali, HU Xiongguo, ZUO Jianbo, ZOU Yiwen, CHEN Chen, PENG Yinglin (453)
- Molecular docking and functions of interaction between CART and candidate receptors in bovine follicular granulosa cells.....
HAO Qinqin, REN Jing, CHENG Junli, ZHU Zhiwei, XU Dongmei, JIA Xuechun, LI Pengfei (461)
- Generation of *LDLR*-knockout pig cells using by CRISPR/Cas9 technology.....
HAN Diangang, HU Juan, DONG Jun, ZHOU Sijia, CHEN Chaolin, ZHANG Jiaxiang, XIN Jige (468)
- Antibacterial activity and mechanism of cinnamaldehyde against drug-resistant *Klebsiella pneumoniae*.....
TANG Ting, DU Juan, ZHOU Xiaoxian, ZHAO Sumei, WANG Tao, JIANG Qibin, YIN Lizi (472)
- Enhancement and regulatory mechanism of paeoniflorin on UVB-induced pigmentation mice.....
LIU Xiaoying, HAN Ping, TAI Meiling, WU Shiying, DU Zhiyun (479)
- Genetic diversity analysis of *Pelodiscus sinensis* and their hybrid from two geographical populations of using *Cyt b* sequence.....
XIAO Hewei, HU Yazhou, QIN Qin, XU Dajian, LIANG Yixin, LIU Xiaoyan, WANG Xiaoqing (486)

Agricultural Engineering

- Detection of citrus carried by mountainous orchard monorail transporter based on improved YOLOv5s.....
ZHOU Yuehuai, LI Zhen, ZUO Jiaming, GONG Wanrong, LYU Shilei, WEN Wei, HUANG Ying (491)
- Design and experiment of an online detection and sorting system for citrus sugar content based on visible/near infrared spectroscopy.....
LIU Hao, GONG Zhongliang, WEN Tao, WANG Zhiyu, DAI Xingyong (497)