

# 江苏农业学报

第 27 卷 第 1 期 2011 年 2 月 28 日

## 目 次

### 专 论

江苏省设立专项资金加强农业科技自主创新的实践与思考 ..... 常有宏 (1)

### 遗传育种·耕作栽培·生理生化

控制水稻穗形相关性状的 QTL 定位 ..... 王智权 刘 喜 江 玲 刘世家 陈亮明 尹长斌 翟虎渠 万建民 (5)

稻米淀粉组成及分子结构与食味品质的关系 ..... 金丽晨 耿志明 李金州 王 澎 陈 菲 刘蔼民 (13)

江苏中部机插稻产量构成因素与产量关系的分析 ..... 于林惠 丁艳锋 朱庆森 窦永秀 沈建辉 薛艳凤 凌启鸿 (19)

棉花株型性状的遗传分析 ..... 李成奇 王清连 董 娜 付远志 郭腾利 (25)

麦后棉品种、密度和种植方式对皮棉产量的影响 ..... 陈建平 张 蓉 王海洋 蔡立旺 戚永奎 (31)

抗倒伏甘蓝型油菜 (*Brassica napus* L.) 根和茎解剖学结构分析 ..... 李尧臣 顾 慧 戚存扣 (36)

拟南芥 *LOF1* 基因在赤霉素调控开花过程中的功能 ..... 孙 虹 韩月婷 龚 建 沈颂东 张春义 姜 凌 (45)

用生物合成的长链开环探针进行 SNP 分型 ..... 赵松子 沈向群 (52)

### 植物保护

不同寄主植物对 B 型烟粉虱种群保护酶和解毒酶的影响 ..... 周奋启 陆艳艳 姚 远 张云霞 祝树德 (57)

应用巢式 PCR 检测葡萄根癌病菌 ..... 樊金娟 王 平 刘长远 赵奎华 邢荆涛 (62)

转基因小麦田土壤细菌 16S rDNA V3 片段的 DGGE 分析  
..... 丁衬衬 周艳红 林凡云 徐剑宏 吴季荣 祭 芳 史建荣 (66)

### 土壤肥料·资源环境

甘薯的氮磷钾养分吸收及分配特性 ..... 宁运旺 张永春 朱绿丹 陈丹艳 蔡 枫 汪吉东 许仙菊 胡永红 (71)

$\text{NO}_3^-$ -N 与  $\text{NH}_4^+$ -N 配比对热带地区水培荆芥生长和品质的影响 ..... 陈艳丽 高新生 李绍鹏 (75)

海水灌溉下北美海蓬子盐肥耦合效应的研究 ..... 王茂文 洪立洲 刘 冲 丁海荣 朱小梅 (80)

### 畜牧兽医·水产养殖

4 个猪种的 *PRLR* 基因多态性与产仔性能的关联分析 ..... 冯富彦 李新建 吕 刚 郜军伟 任广志 (85)

猪 *FAT1* 基因 5' 调控区多态性及其与脂肪性状的相关分析 ..... 华绪川 张立凡 蔡兆伟 蒋晓玲 徐宁迎 张金枝 (89)

乳酸菌和甘露寡糖对断奶仔猪生长及血清生化指标的影响 ..... 伍淳操 王建华 (94)

抗菌肽 Dermaseptin S4 体外抑制猪繁殖与呼吸障碍综合征病毒的活性 ..... 曹云飞 王曙阳 梁剑平 李晓明 陆 娟 (100)

促黄体素 (LH) 对猪卵巢颗粒细胞细胞周期及类固醇激素分泌的影响  
..... 王 伟 贺 或 张海燕 田宽校 宋晓光 王晶晶 徐银学 (105)

别藻蓝蛋白标记抗鸡 IgG 荧光抗体的高效制备与鉴定 ..... 朱丽萍 颜世敢 李雁冰 张玉忠 (110)

草鱼呼肠孤病毒分离株 HZ08 基因组 L 节段的全长克隆与序列分析

..... 张超 王庆 石存斌 曾伟伟 刘永奎 杨淞 吴淑勤 (116)

番茄红素油对鲫鱼生长性能和抗氧化性的影响 ..... 孟好 杨鸯飏 单志萍 王建美 (124)

硫酸锌胁迫对克氏原螯虾非特异性免疫因子的影响 ..... 王建国 陆宏达 (129)

园 艺

非洲红茄与栽培茄种间杂种及其回交后代的鉴定 ..... 庄勇 王述彬 (137)

外源脯氨酸对 NaCl 胁迫下甜瓜幼苗生长和活性氧物质代谢的影响 ..... 颜志明 孙锦 郭世荣 (141)

黑莓品种 Boysen 果实发育与营养成分的变化规律

..... 吴文龙 王小敏 赵慧芳 李维林 闫连飞 崔恩惠 李海燕 屈乐文 (146)

加工贮藏·质量安全

高压脉冲电场与热协同对液态蛋杀菌的新工艺及其对液态蛋品质的影响

..... 赵伟 杨瑞金 张文斌 华霄 李春阳 (152)

辐照处理对 2 种甘薯的保鲜效果 ..... 刘红锦 王炜 李鹏霞 李建军 黄开红 (160)

南美白对虾冷藏过程中的细菌分离、初步鉴定及菌相分析 ..... 赵海鹏 谢晶 严文蓉 (164)

不同新鲜度冷却猪肉中挥发物的变化 ..... 顾赛麒 王锡昌 刘源 赵勇 张晶晶 谢晶 潘迎捷 (169)

野生草鱼与养殖草鱼的挥发性成分 ..... 施文正 王锡昌 陶宁萍 朱耀舟 刘源 (177)

顶空-气相色谱法检测原粮中氯化苦和二溴乙烷的残留 ..... 刘贤山 王林祥 陈志华 曹玉华 (183)

气相色谱法测定水产品中五氯苯酚及其钠盐残留量 ..... 朱晓华 吴燕如 王凯 宋红波 封莉 吴光红 (188)

唑草酮在水稻和稻田中的气相色谱检测 ..... 张志勇 王冬兰 吴长付 张存政 刘贤进 (195)

农业经济·农业信息

中国大豆生产效率变动及收敛性分析 ..... 王怀明 尼楚君 徐锐钊 (199)

南京溧水农户参与专业合作社的意愿调查与研究 ..... 方鸣 应瑞瑶 周力 (204)

果蝇求偶行为为计算机检测识别方法 ..... 梁敬东 余倩倩 谢元澄 张云 王书平 胡文斌 李飞 (209)

综 述

植物表面特性与农药雾滴行为关系的研究进展 ..... 许小龙 徐广春 徐德进 顾中言 (214)

研究简报

苯醚·己唑醇对水稻纹枯病菌室内抑菌活性及田间防治效果

..... 吉沐祥 庄义庆 缪康 吴祥 韩平定 朱成刚 杨成 邵春 龚帮东 (219)

烟草黄瓜花叶病毒宿州分离物 CP 基因的序列分析及亚组鉴定 ..... 张兴桃 高贵珍 曹稳根 赵亮 王海潮 (221)

外来植物土荆芥的化感作用潜力 ..... 许桂芳 周修任 王鸿升 孟丽 刘明久 (223)

垂花香薷注射液接种鸡胚抗鸡新城疫病毒研究 ..... 周广生 张步彩 王永娟 王海燕 刘玉华 刘莉 郭方超 (226)

日粮添加蜂花粉对肉杂鸡抗氧化性及血清生化指标的影响 ..... 程郁昕 吕锦芳 宁康健 (228)

# JIANGSU JOURNAL OF AGRICULTURAL SCIENCES

Vol. 27 No. 1 February 28 2011

## CONTENTS

### MONOGRAPH

Practice and thinking of establishing a specific fund for enhancing the independent innovation of agricultural science and technology in Jiangsu province ..... CHANG You-hong (1)

### CROP GENETICS AND BREEDING · FARMING AND CULTIVATION · PHYSIOLOGY AND BIOCHEMISTRY

Detection of QTLs for related traits of panicle in rice (*Oryza sativa* L.) ..... WANG Zhi-quan, LIU Xi, JIANG Ling, LIU Shi-jia, CHEN Liang-ming, YIN Chang-bin, ZHAI Hu-qu, WAN Jian-min (5)

Correlation between components and molecule structure of rice starch and eating quality ..... JIN Li-chen, GENG Zhi-ming, LI Jin-zhou, WANG Peng, CHEN Fei, LIU Ai-min (13)

Analysis of yield components and grain yield of mechanical transplanting rice in Mid-Jiangsu ..... YU Lin-hui, DING Yan-feng, ZHU Qing-sen, DOU Yong-xiu, SHEN Jian-hui, XUE Yan-feng, LING Qi-hong (19)

Inheritance of plant architecture traits in upland cotton (*G. hirsutum* L.) ..... LI Cheng-qj, WANG Qing-lian, DONG Na, FU Yuan-zhi, GUO Teng-li (25)

Effects of cotton varieties, densities, and planting patterns on cotton lint yield ..... CHEN Jian-ping, ZHANG E, WANG Hai-yang, CAI Li-wang, QI Yong-kui (31)

Anatomical structures of root and stem of lodging resistance lines in *Brassica napus* L. .... LI Yao-chen, GU Hui, QI Cun-kou (36)

Role of *LOF1* gene in gibberellin-regulated flowering in *Arabidopsis thaliana* ..... SUN Hong, HAN Yue-ting, GONG Jian, SHEN Song-dong, ZHANG Chun-yi, JIANG Ling (45)

NP genotyping by biosynthesized long open-circle probes ..... ZHAO Song-zi, SHEN Xiang-qun (52)

### PLANT PROTECTION

Effect of host plants on protective enzymes and detoxification enzymes of *Bemisia tabaci* populations ..... ZHOU Fen-qj, LU Yan-yan, YAO Yuan, ZHANG Yun-xia, ZHU Shu-de (57)

Detection of *Agrobacterium vitis* by nested-PCR ..... FAN Jin-juan, WANG Ping, LIU Chang-yuan, ZHAO Kui-hua, XING Jing-tao (62)

Denaturing gradient gel electrophoresis analysis of 16S rDNA V3 fragment of bacteria in transgenic wheat soil ..... DING Chen-chen, ZHOU Yan-hong, LIN Fan-yun, XU Jian-hong, WU Ji-rong, JI Fang, SHI Jian-rong (66)

### SOIL FERTILIZER · RESOURCE AND ENVIRONMENT

Uptake and distribution of nitrogen, phosphorus and potassium in sweetpotato (*Ipomoea batatas* L.) ..... NING Yun-wang, ZHANG Yong-chun, ZHU Lü-dan, CHEN Dan-yan, CAI Feng, WANG Ji-dong, XU Xian-ju, HU Yong-hong (71)

Effects of different  $\text{NO}_3^-$ -N/  $\text{NH}_4^+$ -N ratios on the development and quality of the hydroponic *Schizonepeta tenuifolia* briq in tropics ..... CHEN Yan-li, GAO Xin-sheng, LI Shao-peng (75)

Coupling effect of salt and fertilizer application on *Salicornia bigelovii* Torr. under seawater irrigation condition ..... WANG Mao-wen, HONG Li-zhou, LIU Chong, DING Hai-rong, ZHU Xiao-mei (80)

### ANIMAL HUSBANDRY AND VETERINARY SCIENCES · AQUICULTURE

Association analysis of genetic polymorphism of *PRLR* gene with reproductive performance of four swine breeds ..... FENG Fu-yan, LI Xin-jian, LÜ Gang, GAO Jun-wei, REN Guang-zhi (85)

Polymorphism in 5' regulatory region of porcine *FATPI* gene and its association with fat traits ..... HUA Xu-chuan, ZHANG Li-fan, CAI Zhao-wei, JIANG Xiao-ling, XU Ning-ying, ZHANG Jin-zhi (89)

Effects of lactic acid bacteria and mannan oligosaccharides on growth performance and serum biochemical parameters of weaned piglets ..... WU Chun-cao, WANG Jian-hua (94)

Inhibition against porcine reproductive and respiratory syndrome virus *in vitro* by antibiotic peptide dermaseptin S4 ..... CAO Yun-fei, WANG Shu-yang, LIANG Jian-ping, LI Xiao-ming, LU Juan (100)

- Effects of luteinizing hormone on cell cycle and steroid secretion of porcine granulosa cells  
 ..... WANG Wei, HE Yu, ZHANG Hai-yan, TIAN Kuan-xiao, SONG Xiao-guang, WANG Jing-jing, XU Yin-xue (105)
- Preparation and identification of allophycocyanin-labeled anti-chicken IgG fluorescence antibody  
 ..... ZHU Li-ping, YAN Shi-gan, LI Yan-bing, ZHANG Yu-zhong (110)
- Cloning and sequence analysis of large segments from the genome of one grass carp reovirus isolate HZ08  
 ..... ZHANG Chao, WANG Qing, SHI Cun-bin, ZENG Wei-wei, LIU Yong-kui, YANG Song, WU Shu-qin (116)
- Effects of lycopene oil on growth performance and antioxidation of *Carassius auratus*  
 ..... MENG Yu, YANG Yuan-jie, SHAN Zhi-ping, WANG Jian-mei (124)
- Changes of the activities of nonspecific immunity factors of *Procambarus clarkii* exposed to zinc sulphate ..... WANG Jian-guo, LU Hong-da (129)

## HORTICULTURE

- Identification of interspecific hybrid and its backcross progenies of *Solanum aethiopicum* group *Aculeatum* and *S. melongena*  
 ..... ZHUANG Yong, WANG Shu-bin (137)
- Effects of exogenous proline on growth and reactive oxygen substance metabolism of melon seedlings under salt stress  
 ..... YAN Zhi-ming, SUN Jin, GUO Shi-rong (141)
- Fruit development and fruit nutrition content changes of blackberry boysen  
 ..... WU Wen-long, WANG Xiao-min, ZHAO Hui-fang, LI Wei-lin, LÜ Lian-fei, CUI En-hui, LI Hai-yan, QU Le-wen (146)

## PROCESSING AND STORAGE · QUALITY SAFETY

- Synergetic effect of pulsed electric fields and mild thermal treatment on microbial inactivation and qualities of liquid egg  
 ..... ZHAO Wei, YANG Rui-jin, ZHANG Wen-bin, HUA Xiao, LI Chunyang (152)
- Preservation effect of irradiation on two varieties of sweet potato ... LIU Hong-jin, WANG Wei, LI Peng-xia, LI Jian-jun, HUANG Kai-hong (160)
- Isolation and identification of bacteria in *Penaeus vannamei* during cold storage and analysis of composition of microorganism  
 ..... ZHAO Hai-peng, XIE Jing, YAN Wen-rong (164)
- Changes of volatile compounds in chilled pork at different freshness  
 ..... GU Sai-qi, WANG Xi-chang, LIU Yuan, ZHAO Yong, ZHANG Jing-jing, XIE Jing, PAN Ying-jie (169)
- Volatile compounds of wild and cultured grass carps ..... SHI Wen-zheng, WANG Xi-chang, TAO Ning-ping, ZHU Yao-zhou, LIU Yuan (177)
- Determination of chloropicrin and 1,2-dibromoethane residues in raw cereal by headspace gas chromatography  
 ..... LIU Xian-shan, WANG Lin-xiang, CHEN Zhi-hua, CAO Yu-hua (183)
- Determination of pentachlorophenol and its sodium residues in aquatic product by gas chromatography  
 ..... ZHU Xiao-hua, WU Yan-ru, WANG Kai, SONG Hong-bo, FENG Li, WU Guang-hong (188)
- Determination of herbicide carfentrazone-ethyl residues in rice and paddy with a gas chromatograph-election capture detector  
 ..... ZHANG Zhi-yong, WANG Dong-lan, WU Chang-fu, ZHANG Cun-zheng, LIU Xian-jin (195)

## AGRICULTURAL ECONOMICS · AGRICULTURAL INFORMATION

- Analysis of change and convergence of soybean productivity in China ..... WANG Huai-ming, NI Chu-jun, XU Rui-li (199)
- Factors influencing farmers' willingness to participate in cooperatives in lishui county of Nanjing city ... FANG Ming, YING Rui-yao, ZHOU Li (204)
- Computer-based approaches to identifying courtship drosophilae  
 ..... LIANG Jing-dong, YU Qian-qian, XIE Yuan-cheng, ZHANG Yun, WANG Shu-ping, HU Wen-bin, LI Fei (209)

## REVIEW

- Research progress on the relationship between characteristics of plant surface and behavior patterns of pesticide droplet  
 ..... XU Xiao-long, XU Guang-chun, XU De-jin, GU Zhong-yan (214)

## BRIEF REPORTS

- Antimicrobial activity of difenoconazole · hexaconazole against *Rhizoctonia solani* in laboratory and control effect on *Thanatephorus cumumeris*  
 ..... JI Mu-xiang, ZHUANG Yi-qing, MIAO Kang, WU Xiang, HAN Ping-ding, ZHU Cheng-gang, YANG Cheng, SHAO Chun, GONG Bang-dong (219)
- Subgroup identification and sequence analysis of CP gene of cucumber mosaic virus isolated from infected tobacco  
 ..... ZHANG Xing-tao, GAO Gui-zhen, CAO Wen-gen, ZHAO Liang, WANG Hai-chao (221)
- Allelopathic potential of exotic plant *Chenopodium ambrosioides* ..... XU Gui-fang, ZHOU Xiu-ren, WANG Hong-sheng, MENG Li, LIU Ming-jiu (223)
- Antiviral activity of *Elsholtzia pmdulifora* against Newcastle disease virus by injecting liquid into chicken embryo  
 ..... ZHOU Guang-sheng, ZHANG Bu-cai, WANG Yong-juan, WANG Hai-yan, LIU Yu-hua, LIU Li, GUO Fang-chao (226)
- Effect of dietary supplementation of bee pollen on anti-oxidation and biochemical indexes in serum of hybrid broilers  
 ..... CHENG Yu-xin, LÜ Jin-fang, NING Kang-jian (228)