

# 江苏农业学报

第 26 卷 第 4 期 2010 年 8 月 31 日

## 目 次

### 遗传育种·耕作栽培·生理生化

- 粳型短光敏核不育系 5021S 育性基因的定位····· 黄胜东 赵志刚 江 玲 翟虎渠 万建民 (673)
- 高温对早籼稻花后籽粒氮代谢关键酶活性及蛋白质含量的影响 ····· 肖辉海 王文龙 郝小花 (680)
- 小麦叶片衰老期间内肽酶同工酶的变化 ····· 芮 琪 张 鹏 董汉松 徐朗莱 (686)
- 徐淮平原农田防护林对小麦光合生理生态的影响 ····· 赵忠宝 万福绪 刘奕琳 张维玲 (691)
- 施氮模式对冬小麦越冬期冻害和茎秆抗倒伏性能的影响 ····· 魏凤珍 李金才 屈会娟 沈学善 (696)
- 不同株型玉米的干物质积累、分配及转运特征 ····· 宋凤斌 童淑媛 (700)
- 湖南甘薯品种 AFLP 标记的遗传差异分析 ····· 张超凡 黄艳岚 周 虹 易九红 (706)
- 种植密度对烤烟质体色素及其降解产物的影响 ····· 赵铭钦 张 迪 赵进恒 姬小明 张广富 吕中显 (711)
- 脱硫酸废弃物对碱胁迫下油葵幼苗抗氧化酶活性和膜脂过氧化作用的影响  
····· 岳自慧 毛桂莲 许 兴 郑国琦 杨 涓 (716)

### 植物保护

- 小麦根围禾谷丝核菌拮抗菌的鉴定、抗生素产生和根部定殖研究 ····· 张美云 李 伟 陈怀谷 鲁国东 王宗华 (721)

### 土壤肥料·资源环境

- 有机栽培、特别栽培对 4 种蔬菜产量和品质的影响 ····· 沈茂华 和文龙 严少华 程慧林 (729)
- 氮素形态对菘蓝活性成分和矿质元素含量的影响 ····· 晏枫霞 王康才 唐晓清 罗春红 (735)
- 铅胁迫对莴苣种子萌发和部分生理代谢的影响 ····· 任艳芳 何俊瑜 张 冲 王思梦 (740)
- 纳米羟基磷灰石对重金属污染土壤的修复及其对微生物群落结构的影响  
····· 杜传宝 赵海燕 胡 锋 李辉信 魏正贵 (745)
- 太湖地区奶牛运动场氮、磷淋溶及流失通量 ····· 朱宏鹤 常志州 叶小梅 (750)

### 畜牧兽医·水产养殖

- 牛胚蛋白在 COS-7 细胞中的表达  
····· 丁耀忠 张 杰 刘永生 陈豪泰 马丽娜 马艳平 杨生海 王 猛 刘文倩 殷 宏 (755)
- 脱氢表雄酮对 AA 肉种鸡脂类代谢的影响 ····· 纪长谨 张源淑 徐国银 陈 娟 马海田 邹思湘 (760)
- 混合油脂对黄羽肉鸡生产性能、屠宰性能和肌肉抗氧化特性的影响 ····· 王远孝 黄雪新 张莉莉 王 恬 (766)
- 展示 M2e 表位的颗粒疫苗制备及其免疫原性分析 ····· 张国广 李东霄 张辉煌 董 美 陈 亮 (772)
- 黑龙江野鲤核糖体内转录间隔区 1 (ITS-1) 的克隆及二级结构的预测与分析  
····· 钟立强 张成锋 蔡生力 刘 红 李 冰 朱 健 (778)
- 动物卫生风险管理机制构建及管理资源合理配置初探 ····· 陆昌华 黄胜海 吴孜恣 胡肆农 白云峰 白红武 (784)

# 园 艺

不结球白菜抗坏血酸过氧化物酶基因克隆及其原核表达载体构建

..... 马成英 侯喜林 刘同坤 李俊星 张蜀宁 李 英 (790)

两个砂梨品种黑皮病敏感性的生理特性比较 ..... 李 慧 丛 郁 盛宝龙 蔺 经 常有宏 (796)

## 加工贮藏·质量安全

低温减压对大团蜜露水蜜桃软化及膜伤害生理的影响 ..... 周慧娟 乔勇进 张绍铃 王海宏 陈召亮 郑先章 (802)

辐照对脱水胡萝卜中微生物 ATP 生物发光的影响  
..... 冯 敏 杨 萍 肖 欢 朱佳廷 李行通 林家彬 唐玉新 王德宁 (808)

复合生物保鲜剂对南美白对虾的保鲜效果 ..... 赵海鹏 李清纯 谢 晶 凌萍华 杨胜平 (812)

壳聚糖结合茶多酚涂膜保鲜带鱼的效果 ..... 杨胜平 谢 晶 佟 懿 李建雄 凌萍华 (818)

酸性电解水对副溶血性弧菌的杀灭效果 ..... 谢 军 孙晓红 潘迎捷 赵 勇 (822)

冰温贮藏对南美白对虾保鲜效果的影响 ..... 凌萍华 谢 晶 赵海鹏 杨胜平 (828)

基于正交试验和神经网络的虫草素超临界 CO<sub>2</sub> 萃取预测 ..... 宋江峰 李大婧 刘春泉 (833)

微胶囊法固定平菇半纤维素酶 ..... 裴 哲 朱启忠 韩雷强 李希红 张燕华 (838)

固相萃取结合高效液相色谱同时检测浓缩苹果汁中 6 种农药残留 ..... 牛鹏飞 仇农学 郭玉蓉 杜 寅 (843)

食用酱油中曲霉的检测方法 ..... 王建伟 刘昌来 周艳红 祭 芳 徐剑宏 史建荣 (848)

分光光度法测定鸡蛋黄卵磷脂含量 ..... 朱云芬 陈宽维 葛庆联 韩 威 施祖灏 龚建森 (853)

## 农业经济

基于向量自回归模型的中国农村消费、投资与经济增长的动态关系 ..... 李 响 王 凯 (857)

浅析中国农业标准化体系建设现状、关键控制点及对策 ..... 姚於康 (865)

农业龙头企业长尾营销策略 ..... 邓 玫 (870)

## 综 述

水稻谷蛋白突变体的分类及其分子生物学研究进展

..... 田孟祥 陈 涛 张亚东 朱 镇 赵 凌 赵庆勇 周丽慧 王艳平 王才林 (874)

## 研究简报

不结球白菜胞质雄性不育新材料 90-2 花器特点及分子鉴定

..... 陈龙正 薛 峰 单奇伟 安林海 徐 海 宋 波 苏小俊 袁希汉 (882)

红花石蒜 *mago nashi* (*Lrmago*) 基因的克隆及分析 ..... 李晓丹 夏 冰 江玉梅 王春燕 彭 峰 汪 仁 (885)

普城沙雷氏菌 RsmA 蛋白过量表达菌株的构建 ..... 曾 俊 刘晓光 郭忠建 贾金丽 高克祥 曹 军 (888)

抑制素质粒 (pCISI) DNA 卵黄抗体的制备 ..... 张红琳 周红霞 周业飞 茹达干 (891)

间接 ELISA 法检测苏云金芽孢杆菌 (*Bt*) Cry1Ab 毒蛋白抗体方法的建立

..... 张 霄 纪 炜 王 耘 温 爽 刘贤进 (894)

# JIANGSU JOURNAL OF AGRICULTURAL SCIENCES

Vol. 26 No. 4 August 31 2010

## CONTENTS

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

- QTL Mapping for Fertility Gene of a New Short Photoperiod-sensitive Genic Male Sterile *Japonica* Rice Line 5021S  
..... HUANG Sheng-dong, ZHAO Zhi-gang, JIANG Ling, ZHAI Hu-qu, WAN Jian-min (673)
- Effects of High Temperature on Key Enzyme Activities Related to Nitrogen Metabolism and Protein Content of Early-*indica* Rice Grain  
..... XIAO Hui-hai, WANG Wen-long, HAO Xiao-hua (680)
- The Changes of Endopeptidase Isoenzymes during Wheat Leaf Senescence Period ..... RUI Qi, ZHANG Peng, DONG Han-song, XU Lang-lai (686)
- Impact of Farmland Shelterbelts on Photosynthetic Eco-physiological Characteristics of Wheat in Xuhuai Plain Area  
..... ZHAO Zhong-bao, WAN Fu-xu, LIU Yi-lin, ZHANG Wei-ling (691)
- Effects of Nitrogenous Fertilizer Application Pattern on Freeze Injury and Culm Lodging Resistance of Winter Wheat  
..... WEI Feng-zhen, LI Jin-cai, QU Hui-juan, SHEN Xue-shan (696)
- Characteristics of Dry Matter Accumulation, Distribution and Translocation in Maize with Different Plant Types  
..... SONG Feng-bin, TONG Shu-yuan (700)
- Genetic Difference of Sweetpotato Varieties in Hunan Province Analyzed by AFLP Markers  
..... ZHANG Chao-fan, HUANG Yan-lan, ZHOU Hong, YI Jiu-hong (706)
- Effect of Planting Density on Chromoplast Pigment and Its Degradation Products in Flue-cured Tobacco Leaf  
..... ZHAO Ming-qin, ZHANG Di, ZHAO Jin-heng, JI Xiao-ming, ZHANG Guang-fu, LÜ Zhong-xian (711)
- Effects of Desulphurized Waste on Antioxidative Enzyme Activities and Lipid Peroxidation of Oil Sunflower Seedlings under Alkali Stress  
..... YUE Zi-hui, MAO Gui-lian, XU Xing, ZHENG Guo-qi, YANG Juan (716)

### PLANT PROTECTION

- Identification, Antibiotics Production and Colonization of Wheat Rhizosphere Antagonistic Bacteria against *Rhizoctonia cerealis*  
..... ZHANG Mei-yun, LI Wei, CHEN Huai-gu, LU Guo-dong, WANG Zong-hua (721)

### SOIL FERTILIZER · RESOURCE AND ENVIRONMENT

- Effects of Organic Farming and Special Farming on the Yield and Quality of Four Kinds of Vegetables  
..... SHEN Mao-hua, HE Wen-long, YAN Shao-hua, CHENG Hui-lin (729)
- Effects of  $\text{NH}_4^+\text{-N}/\text{NO}_3\text{-N}$  Ratio on the Active Component and Mineral Elements Contents of *Isatis indigotica* Fort.  
..... YAN Feng-xia, WANG Kang-cai, TANG Xiao-qing, LUO Chun-hong (735)
- Effects of Pb Stress on Germination and Physiological Metabolism of Lettuce Seeds  
..... REN Yan-fang, HE Jun-yu, ZHANG Chong, WANG Si-meng (740)
- Remediation of Heavy Metal Contaminated Soil by Nano-hydroxyapatite and Its Impact on Microbial Community Structure  
..... DU Chuan-bao, ZHAO Hai-yan, HU Feng, LI Hui-xin, WEI Zheng-gui (745)
- Soil Nitrogen and Phosphorus Eluviation and Transference Fluxes with Surface Runoff from Cow Playgrounds in Taihu Lake Region  
..... ZHU Hong-hu, CHANG Zhi-zhou, YE Xiao-mei (750)

### ANIMAL HUSBANDRY AND VETERINARY SCIENCES · AQUICULTURE

- Expression of Bovine Prion Protein in COS-7 Cell  
..... DING Yao-zhong, ZHANG Jie, LIU Yong-sheng, CHEN Hao-tai, MA Li-na, MA Yan-ping, YANG Sheng-hai, WANG Meng, LIU Wen-qian, YIN Hong (755)
- Effects of Dehydroepiandrosterone on Lipid Metabolism of AA Broiler Breeder  
..... JI Chang-jin, ZHANG Yuan-shu, XU Guo-yin, CHEN Juan, MA Hai-tian, ZOU Si-xiang (760)
- Effect of Blending Fat on Production Performance, Carcasses Traits and Anti-oxidation of Muscles in Chinese Yellow Broilers  
..... WANG Yuan-xiao, HUANG Xue-xin, ZHANG Li-li, WANG Tian (766)
- Preparation and Immunogenicity of Virus-like Particles Vaccine of Display M2e Epitope  
..... ZHANG Guo-guang, LI Dong-xiao, ZHANG Hui-huang, DONG Mei, CHEN Liang (772)
- Cloning and Secondary Structure Analysis of the rDNA Internal Transcribed Spacer 1 in *Cyprinus carpio haematopterus*  
..... ZHONG Li-qiang, ZHANG Cheng-feng, CAI Sheng-li, LIU Hong, LI Bing, ZHU Jian (778)

Construction of Animal Health Risk Management Mechanism and Rational Allocation of Management Resources  
..... LU Chang-hua, HUANG Sheng-hai, WU Zi-min, HU Yi-long, BAI Yun-feng, BAI Hong-wu (784)

## HORTICULTURE

Cloning and Construction of Prokaryotic Expression Vector for APX Gene from Non-heading Chinese Cabbage  
..... MA Cheng-ying, HOU Xi-lin, LIU Tong-kun, LI Jun-xing, ZHANG Shu-ning, LI Ying (790)

The Comparison of Superficial Scald Sensitivities Related Fruit Physiological Characteristics between Two Sandy Pear Varieties  
..... LI Hui, CONG Yu, SHENG Bao-long, LIN Jing, CHANG You-hong (796)

## PROCESSING AND STORAGE · QUALITY SAFETY

Effects of Low Temperature and Hypobaric on Softening and Membrane Injury Physiology of Datuanmilu Peach  
..... ZHOU Hui-juan, QIAO Yong-jin, ZHANG Shao-ling, WANG Hai-hong, CHEN Zhao-liang, ZHENG Xian-zhang (802)

Effect of Irradiation on Bioluminescence of Microbial ATP in Dehydrated Carrot  
..... FENG Min, YANG Ping, XIAO Huan, ZHU Jia-ting, LI Xing-tong, LIN Jia-bin, TANG Yu-xin, WANG De-ning (808)

Effects of Compound Biological Preservative on Prawn (*Penaeus vannamei*)  
..... ZHAO Hai-peng, LI Qing-chun, XIE Jing, LING Ping-hua, YANG Sheng-ping (812)

Effects of Chitosan Combined with Different Concentrations of Tea Polyphenols on Preservation of *Trichiutus haumela*  
..... YANG Sheng-ping, XIE Jing, TONG Yi, LI Jian-xiong, LING Ping-hua (818)

Effect of Acidic Electrolyzed Water on Inactivation of *Vibrio Parahaemolyticus*  
..... XIE Jun, SUN Xiao-hong, PAN Ying-jie, ZHAO Yong (822)

Effects of Super-chilling Treatment on Fresh-keeping of Pacific White Shrimp (*Litopenaeus vannamei*)  
..... LING Ping-hua, XIE Jing, ZHAO Hai-peng, YANG Sheng-ping (828)

Yield Prediction of Cordycepin from Cultured *Cordyceps militaris* Extracted by Supercritical CO<sub>2</sub> Based on Orthogonal Experiment and Neural Network  
..... SONG Jiang-feng, LI Da-jing, LIU Chun-quan (833)

Immobilization of Hemicellulase from *Pleurotus ostreatus* by Microencapsulation Method  
..... PEI Zhe, ZHU Qi-zhong, HAN Lei-qiang, LI Xi-hong, ZHANG Yan-hua (838)

Simultaneous Determination of Six Pesticides in Apple Juice Concentrate by a Combination of Solid Phase Extraction with High Performance Liquid Chromatography (SPE-HPLC)  
..... NIU Peng-fei, QIU Nong-xue, GUO Yu-rong, DU Yin (843)

Detection of *Aspergillus* spp. in Soy Sauce ..... WANG Jian-wei, LIU Chang-lai, ZHOU Yan-hong, JI Fang, XU Jian-hong, SHI Jian-rong (848)

Spectrophotometric Determination of Egg-yolk Lecithin Content  
..... ZHU Yun-fen, CHEN Kuan-wei, GE Qing-lian, HAN Wei, SHI Zu-hao, GONG Jian-sen (853)

## AGRICULTURAL ECONOMICS

Dynamic Relationship of Chinese Rural Consumption, Investment and Economic Growth with a Vector Auto Regression (VAR) Model  
..... LI Xiang, WANG Kai (857)

Current Situation, Critical Control Points and Suggestions of Construction of Agricultural Standardization System in China  
..... YAO Yu-kang (865)

Marketing Strategies of Agricultural Leading Enterprise Based on the Long-tail Theory  
..... DENG Mei (870)

## REVIEW

Research Progress in Classification and Molecular Biology of Glutelin Mutants in Rice (*Oryza sativa* L.)  
..... TIAN Meng-xiang, CHEN Tao, ZHANG Ya-dong, ZHU Zhen, ZHAO Ling, ZHAO Qing-yong, ZHOU Li-hui, WANG Yan-ping, WANG Cai-lin (874)

## BRIEF REPORTS

Characterization of Flower Organ and Molecular Identification of Cytoplasmic Male Sterility Line 90-2 in *Brassica campestris* ssp. chinensis  
..... CHEN Long-zheng, XUE Feng, SHAN Qi-wei, AN Lin-hai, XU Hai, SONG Bo, SU Xiao-jun, YUAN Xi-han (882)

Cloning and Analysis of a *mago nashi* Gene (*Lr1mago*) from *Lycoris Radiate*  
..... LI Xiao-dan, XIA Bing, JIANG Yu-mei, WANG Chun-yan, PENG Feng, WANG Ren (885)

Construction of RsmA Overexpression Strain of *Serratia plymuthica* G3  
..... ZENG Jun, LIU Xiao-guang, GUO Zhong-jian, JIA Jin-li, GAO Ke-xiang, CAO Jun (888)

Preparation of Egg Yolk Immunoglobulins from Hens ..... ZHANG Hong-lin, ZHOU Hong-xia, ZHOU Ye-fei, MAO Da-gan (891)

Establishment of Indirect ELISA Method for Detection of Antibody against Bt Cry1Ab Toxin Protein  
..... ZHANG Xiao, JI Wei, WANG Yun, WEN Shuang, LIU Xian-jin (894)