



ISSN 0578-1752  
CODEN CKNYAR

# 中国农业科学

SCIENTIA AGRICULTURA SINICA

第45卷 第21期

Vol. 45 No. 21

# 2012

中国农业科学院主办

Sponsored by the Chinese Academy of Agricultural Sciences

## 目 次

### 作物遗传育种·种质资源·分子遗传学

- |      |                                   |     |     |     |     |
|------|-----------------------------------|-----|-----|-----|-----|
| 4335 | 大豆对 SMV 株系 SC10 的抗性遗传及抗病基因的定位研究   | 李春燕 | 杨永庆 | 王大刚 | 李华伟 |
|      |                                   |     | 郑桂杰 | 王 涛 | 智海剑 |
| 4343 | 拟南芥 <i>TUA2</i> 参与 ABA 胁迫下的种子萌发过程 | 刘海浩 | 吴立柱 | 岳智亮 | 潘延云 |

### 耕作栽培·生理生化·农业信息技术

- |      |                               |     |     |     |     |
|------|-------------------------------|-----|-----|-----|-----|
| 4351 | 保卫细胞微管骨架参与蛋白丝氨酸/苏氨酸磷酸化调节的气孔运动 |     | 叶 子 | 黄聪聪 | 于 荣 |
| 4361 | 不同品种和氮素条件下水稻茎鞘夹角动态模拟          | 张永会 | 汤 亮 | 刘小军 | 曹卫星 |
|      |                               |     |     |     | 朱 艳 |
| 4369 | 湿地高分辨率遥感影像的变化检测               |     | 祝锦霞 | 郭庆华 | 王 珂 |

### 植物保护

- |      |                             |     |     |     |     |
|------|-----------------------------|-----|-----|-----|-----|
| 4377 | 黑龙江省大豆灰斑病菌生理小种及遗传关系分析       | 丁俊杰 | 顾 鑫 | 杨晓贺 | 赵海红 |
|      |                             | 申宏波 | 姜翠兰 | 任相林 | 刘春燕 |
|      |                             |     |     | 胡国华 | 陈庆山 |
| 4388 | 基于 SCAR 标记的小麦禾谷孢囊线虫快速分子检测技术 | 亓晓莉 | 彭德良 | 彭 煥 | 龙海波 |
|      |                             |     |     | 黄文坤 | 贺文婷 |

### 土壤肥料·节水灌溉·农业生态环境

- |      |                         |     |     |     |     |
|------|-------------------------|-----|-----|-----|-----|
| 4396 | 长期定位施肥对棕壤钾素吸附解吸动力学特征的影响 | 李 娜 | 韩立思 | 吴正超 | 王 月 |
|      |                         |     |     | 兰 宇 | 韩晓日 |
| 4403 | 有机无机肥料配合施用对日光温室土壤氨挥发的影响 | 郝小雨 | 高 伟 | 王玉军 | 金继运 |
|      |                         |     | 黄绍文 | 唐继伟 | 张志强 |

### 园艺

- |      |                                       |     |     |     |     |
|------|---------------------------------------|-----|-----|-----|-----|
| 4415 | NaCl 胁迫对不同耐盐黄瓜品种根系分泌物主要成分的影响          |     | 吴凤芝 | 周新刚 | 包 静 |
| 4428 | UV-C 对葡萄果实发育过程中黄烷醇类多酚积累及隐色花色苷还原酶表达的影响 | 温鹏飞 | 邢延富 | 牛铁泉 | 高美英 |
|      |                                       |     |     |     | 牛兴艳 |
| 4437 | 国庆 1 号温州蜜柑果实成熟过程中极性代谢物的变化             | 刘淑桢 | 韩静雯 | 云 泽 | 王金秋 |
|      |                                       | 徐 娟 | 张红艳 | 邓秀新 | 程运江 |

### 贮藏·保鲜·加工

- |      |                         |     |     |     |     |
|------|-------------------------|-----|-----|-----|-----|
| 4447 | 高温短时蒸汽处理对玛咖黑芥子酶活性及品质的影响 | 涂行浩 | 郑 华 | 张 弘 | 甘 瑾 |
|      |                         |     | 张雯雯 | 李 坤 | 徐 涓 |

## 畜牧·资源昆虫

- |      |                                      |     |     |     |     |
|------|--------------------------------------|-----|-----|-----|-----|
| 4457 | 体外法优化肉鸡日粮非淀粉多糖酶                      | 何科林 | 萨仁娜 | 高杰  | 李东卫 |
|      |                                      |     |     | 庄晓峰 | 张宏福 |
| 4465 | 猪 CatSperB 和 CatSperG 基因的克隆、表达及生物信息学 | 宋成义 | 周家庆 | 冯晓军 | 谢雨琇 |
|      |                                      | 李庆平 | 吴晗  | 高波  | 王霄燕 |
| 4475 | 中国美利奴羊(新疆军垦型)核因子 I/B 基因的克隆及表达        | 荣恩光 | 于磊  | 杨华  | 张永胜 |
|      |                                      |     | 马春萍 | 李辉  | 王宁  |
| 4484 | 基于微卫星标记的东北黑蜂群体遗传多态性分析                | 彭文君 | 罗其花 | 李长春 | 刘晓东 |
|      |                                      |     | 马玉珍 | 郭军  | 安建东 |

## 兽医

- |      |                        |     |     |     |     |
|------|------------------------|-----|-----|-----|-----|
| 4492 | 坦布苏病毒荧光定量 RT-PCR 方法的建立 | 于春梅 | 刁有祥 | 唐熠  | 崔京腾 |
|      |                        | 高绪慧 | 张颖  | 鞠小军 | 武利利 |

## 农业经济与管理

- |      |  |  |     |     |     |
|------|--|--|-----|-----|-----|
| 4501 | 黄土高原农林草牧耦合发展战略研究                       |  |     |     | 刘维佳 |
| 4508 | 初始禀赋差异、农业补贴与农地流转选择——全国 8 省 30 村的微观实证分析 |  |     |     | 侯石安 |
| 4517 | 农业源温室气体减排技术和管理措施适用性筛选                  |  |     | 米松华 | 黄祖辉 |
| 4528 | 中原经济区三化协调路径及关键问题研究                     |  | 吴一平 | 陈素云 | 孙德中 |

## 研究简报

- |      |                 |    |     |    |     |
|------|-----------------|----|-----|----|-----|
| 4534 | 带有缺失数据的一种动态聚类方法 | 肖静 | 骆如九 | 宋雯 | 汤在祥 |
|      |                 |    |     |    | 徐辰武 |

## CONTENTS

**CROP GENETICS & BREEDING • GERMLASM RESOURCES • MOLECULAR GENETICS**

- 4335 Studies on Mapping and Inheritance of Resistance Genes to SMV Strain SC10 in Soybean LI Chun-yan, YANG Yong-qing, WANG Da-gang, LI Hua-wei, ZHENG Gui-jie, WANG Tao, ZHI Hai-jian
- 4343 *Arabidopsis TUA2* Gene Mediates Seed Germination Under ABA Stress LIU Hai-hao, WU Li-zhu, YUE Zhi-liang, PAN Yan-yun

**TILLAGE & CULTIVATION • PHYSIOLOGY & BIOCHEMISTRY • AGRICULTURE INFORMATION TECHNOLOGY**

- 4351 Microtubules in Guard Cells Involve in Serine/Threonine Phosphorylation During Stomatal Movement YE Zi, HUANG Cong-cong, YU Rong
- 4361 Dynamic Simulation on Angle Between Stem and Sheath in Different Rice Cultivars and Nitrogen Rates ZHANG Yong-hui, TANG Liang, LIU Xiao-jun, CAO Wei-xing, ZHU Yan
- 4369 Change Detection on Wetlands Using High Spatial Resolution Imagery ZHU Jin-xia, GUO Qing-hua, WANG Ke

**PLANT PROTECTION**

- 4377 Analysis of Race and Genetic Relationship of *Cercospora sojina* in Heilongjiang Province DING Jun-jie, GU Xin, YANG Xiao-he, ZHAO Hai-hong, SHEN Hong-bo, JIANG Cui-lan, SHI Xiang-lin, LIU Chun-yan, HU Guo-hua, CHEN Qing-shan
- 4388 Rapid Molecular Diagnosis Based on SCAR Marker System for Cereal Cyst Nematode QI Xiao-li, PENG De-liang, PENG Huan, LONG Hai-bo, HUANG Wen-kun, HE Wen-ting

**SOIL & FERTILIZER • WATER-SAVING IRRIGATION • AGROECOLOGY & ENVIRONMENT**

- 4396 Kinetics of K<sup>+</sup> Adsorption and Desorption of Brown Soil Under Long-Term Fertilization LI Na, HAN Li-si, WU Zheng-chao, WANG Yue, LAN Yu, HAN Xiao-ri
- 4403 Effects of Combined Application of Organic Manure and Chemical Fertilizers on Ammonia Volatilization from Greenhouse Vegetable Soil HAO Xiao-yu, GAO Wei, WANG Yu-jun, JIN Ji-yun, HUANG Shao-wen, TANG Ji-wei, ZHANG Zhi-qiang

**HORTICULTURE**

- 4415 Effects of NaCl Stress on Root Exudates of Cucumber Cultivars WU Feng-zhi, ZHOU Xin-gang, BAO Jing
- 4428 Accumulation of Flavanols, Expression of Leucoanthocyanidin Reductase Induced by UV-C Irradiation During Grape Berry Development WEN Peng-fei, XING Yan-fu, NIU Tie-quan, GAO Mei-ying, NIU Xing-yan
- 4437 Changes of Polar Metabolites in Guoqing No.1 Satsuma Mandarin During Fruit Ripening LIU Shu-zhen, HAN Jing-wen, YUN Ze, ANG Jin-qi, XU Juan, ZHANG Hong-yan, DENG Xiu-xin, CHENG Yun-jiang

**STORAGE • FRESH-KEEPING • PROCESSING**

- 4447 Effects of High Temperature-Short Time Steam Blanching (HTSTSB) on Myrosinase Activity and Nutrients of Maca TU Xing-hao, ZHENG Hua, ZHANG Hong, GAN Jin, ZHANG Wen-wen, LI Kun, XU Juan

**ANIMAL SCIENCE • RESOURCE INSECT**

- 4457 Study on Optimization of Non-Starch Polysaccharide Enzymes of Broiler Diets *in Vitro* HE Ke-lin, SA Ren-na, GAO Jie, LI Dong-wei, ZHUANG Xiao-feng, ZHANG Hong-fu
- 4465 Cloning, Expression and Bioinformatics Analysis of Porcine CatSperB and CatSperG Genes SONG Cheng-yi, ZHOU Jia-qing, FENG Xiao-jun, XIE Yu-xiu, LI Qing-ping, WU Han, GAO Bo, WANG Xiao-yan
- 4475 Characterization of Tissue Expression and Cloning of Nuclear Factor I/B Gene in Chinese Merino (Xinjiang Junken Type) RONG En-guang, YU Lei, YANG Hua, ZHANG Yong-sheng, MA Chun-ping, LI Hui, WANG Ning
- 4484 Genetic Diversity of Northeastern Black Bee (*Apis mellifera* ssp.) in China Based on Microsatellite Markers PENG Wen-jun, LUO Qi-hua, LI Chang-chun, LIU Xiao-dong, MA Yu-zhen, GUO Jun, AN Jian-dong

**VETERINARY SCIENCE**

- 4492 Fluorescence Quantitative RT-PCR Assay for Detection of Tembusu Virus YU Chun-mei, DIAO You-xiang, TANG Yi, CUI Jing-teng, GAO Xu-hui, ZHANG Ying, JU Xiao-jun, WU Li-li

**AGRICULTURAL ECONOMY & MANAGEMENT**

- 4501 Strategies on Integrated Development of Agriculture- Forestry-Grass- Grazing in the Loess Plateau of China LIU Wei-jia
- 4508 Differences in Endowments of Peasant Household, Agricultural Subsidies, and Peasants' Willingness to Transfer Farmlands —A Micro-Empirical Analysis from a Survey on Peasant Household of 30 Villages in 8 Provinces HOU Shi-an
- 4517 Applicability Screening of Mitigation Technologies and Management Practices of Emissions of Greenhouse Gases from Agriculture Sector MI Song-hua, HUANG Zu-hui
- 4528 Research on Path and Key Problem of Coordinated Development of Urbanization, Agricultural Modernization and Industrialization in Central Plains Economic Region WU Yi-ping, CHEN Su-yun, SUN De-zhong

**RESEARCH NOTES**

- 4534 A Dynamic Clustering Method with Missing Data XIAO Jing, LUO Ru-jiu, SONG Wen, TANG Zai-xiang, XU Chen-wu