

ISSN 1000-7091



# 华北农学报

ACTA AGRICULTURAE BOREALI-SINICA

■ 中国精品科技期刊 ■ 中文核心期刊 ■ 中国科学引文数据库核心期刊 ■  
■ 中国科技核心期刊 ■ 中国农业核心期刊 ■ RCCSE中国权威学术期刊 ■

**2015** 第30卷 第5期  
Vol. 30 No. 5

华北农学报编辑部



目 次

小麦高亲和性钾转运蛋白基因(*HKT1*)多样性分析与染色体定位 ..... 李孟军,李亚青,张 磊(1)

抗条锈病基因 *YrCH5026* 的遗传分析及分子定位 ..... 侯丽媛,乔麟轶,张晓军,李 欣,詹海仙,畅志坚(7)

利用转录组及 iTRAQ 技术筛选高油酸油菜抗病相关基因  
..... 张振乾,肖 钢,官春云,邬贤梦,熊兴华,李云昌,胡 琼,陈社员(16)

大豆 *GmNAC011* 基因的分离及对异黄酮合酶基因 *GmIFS2* 的调控分析  
..... 刘晓庆,陈华涛,张红梅,袁星星,崔晓艳,顾和平,陈 新(25)

基于高代回交分离群体的小麦抗赤霉病 QTL *Fhb4* 和 *Fhb5* 的遗传互作模式分析  
..... 许 峰,闫素辉,张从宇,时侠清,李文阳,张子学(30)

乙脑病毒 Henan-09-03 株 E 蛋白结构与功能生物信息学分析 ..... 张二芹,滕 蔓,罗 俊,王瑞宁,许倩茹,邓瑞广,张改平(36)

转 *CrytIAc-w* 基因抗虫玉米的获得及分子鉴定 ..... 燕树锋,铁双贵,岳润清,韩小花,齐建双,卢彩霞(41)

长叶红砂黄烷酮-3-羟基转移酶 3 基因(*RtF3H3*)的克隆、表达分析及酵母表达载体的构建  
..... 张慧荣,赵萍萍,冯 杰,王迎春,郑琳琳(45)

IGS 在小麦叶锈菌中的多态性分析初探 ..... 杜冬冬,张毓妹,张河山,杨文香,刘大群(51)

杜鹃红山茶 *CaCPI* 基因的克隆及过量表达提高烟草植株的抗虫性 ..... 王江英,范正琪,殷恒福,吴 斌,刘伟鑫,李纪元(57)

RHDV VLPs 单克隆抗体的制备及其识别表位的初步定位  
..... 宋艳华,胡 波,范志宇,彭 伟,魏后军,薛家宾,徐为中,王 芳(65)

甘肃高山细毛羊及其杂种羊 *GH* 基因第 3 内含子多态性与生长性状的相关性  
..... 张恩宇,罗玉柱,李少斌,王继卿,刘 秀,闫 伟,管生栋,徐洪福(71)

克隆山羊成纤维细胞系的建立与生物学特性的研究 ..... 刘 通,王 恒,李运生,张运海(77)

小麦株高 QTL 定位及其水分环境互作遗传分析  
..... 叶亚琼,栗孟飞,刘 媛,陈菁菁,杨德龙,胡亮亮,吕婷婷,焦东利,柴守玺(83)

无选择标记基因的优质香稻新品系培育  
..... 冯梦诗,叶 俊,候莉莉,李 明,唐 丁,张建祥,王为云,徐志豪,李亚飞,顾铭洪,程祝宽,于恒秀(92)

大麦株高近等基因系的籽粒性状差异及相关性分析 ..... 杜 欢,张 颖,薛梦瑶,靖皎皎,白志英,李存东(97)

亚麻花蕾发育相关基因的表达研究  
..... 姜 才,伊六喜,高凤云,贾霄云,张 辉,张立华,任龙梅,周 宇,赵小庆,斯钦巴特尔(104)

与蓖麻种子大小性状连锁的 RAPD 分析 ..... 包春光,黄凤兰,朱国立,刘 浩,杜 娟,彭 木,陈晓凤,赵 永(108)

黄瓜遗传转化体系优化的研究 ..... 李 蕾,孟永娇,张 璐,娄群峰,李 季,钱春桃,陈劲枫(115)

产碱性蛋白酶菌株的筛选与诱变育种 ..... 郑津辉(122)

印度南瓜四倍体诱变及其特性研究 ..... 刘泽发,闵子杨,孙小武,成 娟,胡一鸿(125)

玉米幼胚再生体系的建立 ..... 王 奕,范俊山,尚丽霞,于志晶,蔡勤安,马 瑞,任 贤(130)

甘蓝型油菜正反交后代叶片净光合速率和叶绿素含量的比较  
..... 张耀文,赵小光,田建华,王 辉,王学芳,李殿荣,侯君利,关周博,韦世豪(135)

不同光质及组合对番茄幼苗生长及生理特性的影响 ..... 刘振威,孙 丽,方婷婷,刘会超,贾文庆(141)

分蘖期控水处理对超级稻产量和生理特性的影响 ..... 王抄抄,孔雷蕾,李妹娟,唐湘如,杜尧东,王 华(146)

播期与密度对烤烟群体光合生产及产量和品质的影响  
..... 郭 宁,严玛丽,邵兰军,周立非,陈泽鹏,黄 浩,曾繁东,林建委,郭俊杰,王 维(153)

施用氮肥对太行山前平原区作物产量和土壤硝态氮残留量的影响 ..... 茹淑华,耿 暖,张国印,王 凌,孙世友(161)

氮钾互作对甘薯根系发育及碳氮代谢酶活性的影响 ..... 汪顺义,李 欢,刘 庆,史衍玺(167)

京东板栗对氮磷钾的响应及养分去向 ..... 张 伟,刘建玲,廖文华,李志田,袁维翰(174)

不同施肥模式对烤烟氮钾肥利用效率及产量和品质的影响  
..... 陈壮壮,郭俊杰,陈泽鹏,贺广生,魏 彬,黄 浩,谢志东,林 勇,周立非,邓世媛,王 维(180)

首蓆不同种植模式下土壤结构及养分的响应 ..... 武海杰,杨国锋,孙 娟,李长忠,刘洪庆,李海梅(189)

不同烤烟品种叶片衰老与质体色素降解及降解产物含量的关系  
..... 武云杰,戚 莹,张小全,宋洋洋,薛 刚,邢雪霞,杨铁钊(197)

耕层构造对春玉米产量形成及生长发育特征的影响  
..... 白 伟,孙占祥,郑家明,郝卫平,刘 勤,冯良山,蔡 倩,冯 晨(205)

华北旱地春玉米不同水分管理下干物质和氮生产与分配特征  
..... 刘胜尧,范凤翠,李家曦,石玉芳,刘梦星,李志宏,张立峰,贾建明(214)

膜下滴灌调亏对绿洲马铃薯生物量分配、产量和水分利用效率的影响  
..... 李炫臻,张恒嘉,邓浩亮,杨晓婷,李 晶,巴玉春(223)

硫硒钨对钼酸盐吸收及钼酸盐转运子的影响 ..... 秦世玉,孙学成,胡承孝,谭启玲(232)

CONTENTS

Nucleotide Diversity and Chromosomal Localization of High-affinity Potassium Uptake Transporter Gene (*HKT1*) in Hexaploid Wheat ..... LI Meng-jun *et al*(1)

Genetic Analysis and Molecular Mapping of a Stripe Rust Resistance Gene *YrCH5026* ..... HOU Li-yuan *et al*(7)

The Study of High Oleic Acid Rapeseed Disease Resistance Related Genes by Transcriptome and iTRAQ Analysis ..... ZHANG Zhen-qian *et al*(16)

Isolation and Regulation Analysis of *GmNAC011* Gene to Isoflavone Synthase Gene *GmIFS2* ..... LIU Xiao-qing *et al*(25)

Resistance to *Fusarium* Head Blight in Wheat Genetic Model Analysis of Major Effect QTL *Fhb4* and *Fhb5* ..... XU Feng *et al*(30)

Bioinformatics Analysis of Structure and Function of Envelope Protein of Japanese Encephalitis Virus Henan-09-03 Strain ..... ZHANG Er-qin *et al*(36)

Acquirement and Molecular Identification of Transgenic Insect-resistant Corn Expressing *CryIAC-w* Gene ..... YAN Shu-feng *et al*(41)

Cloning, Expressing Patterns and Constructing Yeast Expression Vectors of Flavanone-3-hydroxylase3 (*RtF3H3*) from *Reaumuria trigyna* ..... ZHANG Hui-rong *et al*(45)

Primary Study on Polymorphism of Wheat Leaf Rust Based IGS ..... DU Dong-dong *et al*(51)

Cloing *CPI* from *Camellia azalea* and Overexpressing to Tobacco Enhances Insect Tolerance ..... WANG Jiang-ying *et al*(57)

Preparation and Primary Mapping the Epitopes of Monoclonal Antibodies Against RHDV VLPs ..... SONG Yan-hua *et al*(65)

Correlation Ship Investigation of *GH* Gene Intron 3 Polymorphism with Growth Traits in Gansu Alpine Merino and Crossbred Sheep ..... ZHANG En-yu *et al*(71)

Establishment and Biological Characteristics of Fibroblast Cells Derived from Somatic Cloned Goat ..... LIU Tong *et al*(77)

QTL Mapping and QTL × Environmental Interactions for Plant Height in Wheat ..... YE Ya-qiong *et al*(83)

Breeding of Marker-free Fragrant Rice Via Transgenic Approach ..... FENG Meng-shi *et al*(92)

Difference and Correlation Analysis of Grain Traits in the Near-isogenic Line of Plant Height of Barley ..... DU huan *et al*(97)

Temporal and Special Expression of Genes Related to Anther Development of Fax Flower Buds ..... JIANG Cai *et al*(104)

RAPD Analysis of Castor Seed Size Traits Linkage ..... BAO Chun-guang *et al*(108)

Study on Optimization of *Agrobacterium*-mediated Transformation System of Cucumber ..... LI Lei *et al*(115)

Selection and Mutation Breeding of Alkaline Protease-producing Strains ..... ZHENG Jin-hui(122)

Study on Induction and Characterization of Tetraploid Plants in Pumpkin ..... LIU Ze-fa *et al*(125)

Regeneration System and Influencing Factors of Maize ..... WANG Yi *et al*(130)

Comparison of Net Photosynthetic Rate and Chlorophyll Content of *Brassica napus* Between Orthogonal and Reciprocal Combinations ..... ZHANG Yao-wen *et al*(135)

Effects of Different Light Qualities on Growth and Physiological Characteristics of Tomato Seedlings ..... LIU Zhen-wei *et al*(141)

Effect of Water Treatments at Tillering Stage on Super Rice Yield and Physiological Characteristics ..... WANG Chao-chao *et al*(146)

Effects of Sowing and Density on Groups Photosynthetic Production, Yield and Quality of Flue-cured Tobacco ..... GUO Ning *et al*(153)

Effect of Nitrogen Application Rate on Crop Yield and the Soil Nitrate Nitrogen Content in Taihang Piedmont Area ..... RU Shu-hua *et al*(161)

Interactive Effects of Nitrogen and Potassium on Root Growth and Leaf Enzyme Activities of Sweet Potato ..... WANG Shun-yi *et al*(167)

Yield Response of Chinese Chestnut to N, P and K Fertilization in the Gneiss Area of Yanshan Mountain ..... ZHANG Wei *et al*(174)

Effects of Different Fertilization Modes on Nitrogen and Potassium Use Efficiency, Yield and Quality of Flue-cured Tobacco ..... CHEN Zhuang-zhuang *et al*(180)

The Responses of Soil Structures and Nutrients under Different Alfalfa-planting Patterns ..... WU Hai-jie *et al*(189)

Leaf Senescence and Its Relationship with Plastid Pigment Degradation Content and the Degradation Products of Different Varieties Flue-cured Tobacco ..... WU Yun-jie *et al*(197)

Effect of Plough Layer Constructions on Maize Growth and Yield in Western Liaoning Province ..... BAI Wei *et al*(205)

Dry Matter and Nitrogen Production and Allocation of Spring Maize on Dryland of North China in Different Farmland Water Management Patterns ..... LIU Sheng-yao *et al*(214)

Study on Mulched Drip Irrigation and Regulated Deficit Irrigation Potato Cultivation in Oasis Region ..... LI Xuan-zhen *et al*(223)

Sulfur-selenium-tungsten Compete the Molybdate Uptake by Modifying the Gene Expression of Predicted Molybdate Transporters ..... QIN Shi-yu *et al*(232)



# 《华北农学报》(双月刊)

## ACTA AGRICULTURAE BOREALI-SINICA

### 主办单位:

内蒙古自治区农牧业科学院、农学会  
北京市农林科学院、北京市农学会  
河北省农林科学院、河北省农学会  
山西省农业科学院、山西省农学会  
河南省农业科学院、河南省农学会  
天津市农业科学院、天津市农学会

### 华北农学报

HUABEI NONGXUEBAO

(双月刊, 1986年创刊)

第30卷 第5期 2015年10月28日

### ACTA AGRICULTURAE BOREALI-SINICA

(Bimonthly, Started in 1986)

Vol.30 No.5 Oct. 28, 2015

主管单位: 河北省农林科学院  
编辑出版: 《华北农学报》编辑部  
主 编: 冯万玉  
地 址: 石家庄市和平西路 598 号 050051  
电 话: 0311-87652166  
电子邮件: hbnxb@163.com  
印刷装订: 石家庄燕赵创新印刷有限公司  
订 购 处: 全国各地邮局  
国内发行: 河北省报刊发行局  
国外发行: 中国国际图书贸易总公司 (北京 399 信箱)  
定 价: 12.00 元 / 期; 72.00 元 / 年

Responsible Institution: Hebei Academy of Agriculture and Forestry Sciences  
Edited and Published by: Editorial Department of ACTA AGRICULTURAE  
BOREALI-SINICA  
Editor-in-chief: FENG Wan-yu  
Address: 598, West Heping Road, Shijiazhuang 050051  
Telephone: 0311-87652166  
E-mail: hbnxb@163.com  
Domestic Subscription by: Local Post Office  
Domestic Distributor: Hebei Bureau for Distribution of Newspapers and  
Journals  
Issued Abroad by: International Book Trading Corporation P.O.Box 399,  
Beijing, P.R.China  
Price: US\$12.00/Issue; US\$72.00/Year

ISSN 1000-7091  
CN 13-1101/S

邮发代号: 18-10

ISSN 1000-7091



9 771000 709002