

全国中文核心期刊
中国科技核心期刊
中国农业核心期刊
RCCSE中国核心学术期刊
中国科学引文数据库(CSCD)期刊
CAB International 收录期刊
美国《生物学文摘》收录期刊
美国《化学文摘》(CA)收录期刊

首页 (/) 期刊介绍 编委会 投稿须知 期刊订阅 广告合作 联系我们 返回主站
(/Corp/10.aspx) (/Corp/3600.aspx) (/Corp/5006.aspx) (/Corp/50.aspx) (http://www.haasep.cn/)

«上一篇 (DArticle.aspx? type=view&id=200701004)
下一篇 (DArticle.aspx? type=view&id=200701006)



PDF下载 (pdfdown.aspx? Sid=200701005)

+分享 (http://www.jiathis.com/share? uid=1541069)



微信公众号: 大豆科学

[1]郭东全,王延伟,智海剑,等.大豆对SMV SC-13株系群的抗性遗传及基因定位的研究[J].大豆科学,2007,26(01):21-24. [doi:10.3969/j.issn.1000-9841.2007.01.006]
GUO Dong-quan,WANG Yan-wei,ZHI Hai-jian,et al.INHERITANCE AND GENE MAPPING OF RESISTANCE TO SMV STRAIN GROUP SC-13 IN SOYBEAN[J].Soybean Science,2007,26(01):21-24.[doi:10.3969/j.issn.1000-9841.2007.01.006]

点击复制

大豆对SMV SC-13株系群的抗性遗传及基因定位的研究

《大豆科学》 [ISSN:1000-9841 /CN:23-1227/S] 卷: 第26卷 期数: 2007年01期 页码: 21-24 栏目:
出版日期: 2007-02-25

Title: INHERITANCE AND GENE MAPPING OF RESISTANCE TO SMV STRAIN GROUP SC-13 IN SOYBEAN

文章编号: 1000-9841(2007)01-0021-04

作者: 郭东全 (KeySearch.aspx?type=Name&Sel=郭东全); 王延伟 (KeySearch.aspx?type=Name&Sel=王延伟); 智海剑 (KeySearch.aspx?type=Name&Sel=智海剑); 盖钧镞 (KeySearch.aspx?type=Name&Sel=盖钧镞); 李海朝 (KeySearch.aspx?type=Name&Sel=李海朝); 李凯 (KeySearch.aspx?type=Name&Sel=李凯)

南京农业大学大豆研究所, 国家大豆改良中心, 作物遗传与种质创新国家重点实验室, 南京 210095

Author(s): GUO Dong-quan (KeySearch.aspx?type=Name&Sel=GUO Dong-quan); WANG Yan-wei (KeySearch.aspx?type=Name&Sel=WANG Yan-wei); ZHI Hai-jian (KeySearch.aspx?type=Name&Sel=ZHI Hai-jian); GAI Jun-yi (KeySearch.aspx?type=Name&Sel=GAI Jun-yi); LI Hai-chao (KeySearch.aspx?type=Name&Sel=LI Hai-chao); LI Kai (KeySearch.aspx?type=Name&Sel=LI Kai)

Soybean Research Institute of Nanjing Agricultural University/National Center for Soybean Improvement/National Key Laboratory for Crop Genetics and Germplasm Enhancement Nanjing 210095

关键词: 大豆 (KeySearch.aspx?type=Keyword&Sel=大豆); 大豆花叶病毒 (KeySearch.aspx?type=Keyword&Sel=大豆花叶病毒); 抗性遗传 (KeySearch.aspx?type=Keyword&Sel=抗性遗传); 基因定位 (KeySearch.aspx?type=Keyword&Sel=基因定位)

Keywords: Soybean (KeySearch.aspx?type=Keyword&Sel=Soybean); Soybean Mosaic Virus (KeySearch.aspx?type=Keyword&Sel=Soybean Mosaic Virus); Resistance inheritance (KeySearch.aspx?type=Keyword&Sel=Resistance inheritance); Gene mapping (KeySearch.aspx?type=Keyword&Sel=Gene mapping)

分类号: S565.1

DOI: 10.3969/j.issn.1000-9841.2007.01.006 (http://dx.doi.org/10.3969/j.issn.1000-9841.2007.01.006)

文献标志码: A

摘要: 在接种SC-13株系群的情况下, 鉴定了科丰1号×南农1138-2的P₁、P₂、F₁、F₂和184个重组自交家系(RIL)的抗性, 结果显示, 科丰1号(P₁)与F₁全部表现抗病, 南农1138-2(P₂)全部表现感病, 表明抗性为显性; F₂群体和184个重组自交家系出现抗感分离, 卡方适合性检测表明F₂群体抗感分离符合3:1的比例, 重组自交家系抗、感符合1:1分离比率。表明对SC-13株系群的抗性由一对基因控制, 以Rsc-13表示。利用已建立的遗传连锁图对Rsc-13进行了连锁分析, 结果将抗病基因Rsc-13定位于N8-D1b+W连锁群上, 并与抗性基因 Rn1、Rn3、Rsc-7连锁。

Abstract: The P₁, P₂, F₁, F₂ and 184 RILs of Kefeng No. 1×Nannong1138-2 were inoculated with the SMV strain group SC-13 to evaluate their resistance. The results showed that Kefeng No.1 and F₁ were resistant to SC-13, Nannong 1138-2 was susceptible. F₂ segregated in a 3:1 ratio and the RILs in a 1:1 ratio, which indicated a dominant gene controlled the resistance to SC-13. Through linkage analysis, the resistance gene Rsc-13 was mapped on the linkage group N8-D1b+W and linked with Rn1, Rn3, Rsc-7.

参考文献/References:

- [1] 智海剑, 盖钧镞. 大豆对SMV数量抗性的育种 [J]. 大豆科学, 2004, (1): 1-5.
- [2] Wang Y. Genetic analysis of resistance to soybean mosaic virus in four soybean cultivars from China [J]. Crop Science, 1998, 38: 922-925.
- [3] Lim.S.M. Resistance to soybean mosaic virus in soybeans [J]. Phytopathology, 1985, 75: 199-201.
- [4] Bowers G J, Goodman R M. New sources of resistance to seed transmission of soybean mosaic virus in soybeans [J]. Crop Science, 1992, (22): 155-156.
- [5] Buzzell R, Tu J C. Inheritance of soybean stem resistance to soybean mosaic virus [J]. The Journal of Heredity, 1984, 75: 82.
- [6] Kiihl R A S, Hartwig E E. Inheritance of reaction to soybean mosaic virus in soybean [J], Crop Science, 1979, 19: 372-375.
- [7] Gai Junyi, Hu Y Z. Inheritance of resistance of soybean to four local strains of soybean mosaic virus. World Soybean Research Conference IV., 1989, 1182-1187.
- [8] 严隽析, 马育华. 大豆花叶病抗性遗传的初步研究 [J]. 大豆科学, 1985, 4 (4): 249-259.
- [9] 张玉东, 盖钧镞, 马育华, 等. 大豆对两个大豆花叶病毒本地株系抗性的遗传研究 [J]. 作物学报, 1989, 15 (3): 213-220.
- [10] 王修强, 盖钧镞, 喻德跃. 广谱抗源科丰1号对大豆花叶病毒强毒株系SC-8抗性的遗传研究 [J]. 大豆科学, 2003, 8 (3): 190-192.
- [11] 胡继珠, 盖钧镞, 马育华等. 大豆对两个SMV株系抗性的遗传研究 [J]. 南京农业大学学报, 1985, (3): 17-22.
- [12] 东方阳. 大豆对SMV株系抗性遗传分析和RAPD标记研究 [D]. 南京农业大学博士论文, 1999.
- [13] 廖林, 刘玉芝, 孙大敏, 等. 大豆花叶病毒的抗性遗传-几个引用抗源对东北大豆花叶病毒二号株系的抗性遗传 [J]. 遗传学报, 1994, 21 (5): 403-408.

- [14] Kwon S H, Oh J H. Resistance to a necrotic strain of soybean mosaic virus in soybean. *Crop Science*, 1979, 20: 403-404.
- [15] 荣晓燕. 大豆对SMV 3号株系成株抗性遗传的研究[J]. *大豆科学*, 1997, 16(3): 223-226.
- [16] 陈怡. 大豆种质对SMV1号株系的抗性遗传[J]. *黑龙江农业科学*, 1999, (1): 4-6.
- [17] 陈怡, 荣晓燕, 黄承运, 等. 大豆对大豆花叶病毒本地株系抗性的遗传研究[J]. *作物学报*, 1990, 15(3): 213-220.
- [18] Yu Y G, Saghai Maroof M A, Buss G R, et al. RFLP and microsatellite mapping of a gene for soybean mosaic virus resistance [J]. *Phytopathology*, 1994, 84: 60-64.
- [19] 王永军, 东方阳, 王修强, 等. 大豆5个花叶病毒株系抗性基因的定位[J]. *遗传学报*, 2004, 31(1): 87-90.
- [20] 战勇. 黄淮地区大豆花叶病毒的生物学检测、株系鉴定及大豆抗性的遗传与基因定位[D]. 南京农业大学硕士论文, 2003.
- [21] 郭东全, 智海剑, 王延伟, 等. 黄淮中北部大豆花叶病毒株系的鉴定与分布[J]. *中国油料作物学报*, 2005(04): 22-26.
- [22] 濮祖芹, 曹琦, 房德纯, 等. 大豆花叶病毒的株系鉴定[J]. *植物保护学报*, 1982, 9(1): 15-19.
- [23] Hayes AJ, Ma G, Buss GR, Saghai Maroof MA. Molecular marker mapping of Rsv4, a gene conferring resistance to all known strains of soybean mosaic virus [J]. *Crop Science*, 2000, 40(5): 1434-1437.

相似文献/References:

- [1] 刘章雄, 李卫东, 孙石, 等. 1983~2010年北京大豆育成品种的亲本地理来源及其遗传贡献[J]. (article.aspx?type=view&id=201301001) *大豆科学*, 2013, 32(01):1. [doi:10.3969/j.issn.1000-9841.2013.01.002]
- LIU Zhang-xiong, LI Wei-dong, SUN Shi, et al. Geographical Sources of Germplasm and Their Nuclear Contribution to Soybean Cultivars Released during 1983 to 2010 in Beijing [J]. *Soybean Science*, 2013, 32(01):1. [doi:10.3969/j.issn.1000-9841.2013.01.002]
- [2] 李彩云, 余永亮, 杨红旗, 等. 大豆脂酰转氨酶基因GmLTP3的特征分析[J]. (article.aspx?type=view&id=201301002) *大豆科学*, 2013, 32(01):8. [doi:10.3969/j.issn.1000-9841.2013.01.003]
- LI Cai-yun, YU Yong-liang, YANG Hong-qi, et al. Characteristics of a Lipid-transfer Protein Gene GmLTP3 in *Glycine max* [J]. *Soybean Science*, 2013, 32(01):8. [doi:10.3969/j.issn.1000-9841.2013.01.003]
- [3] 王明霞, 崔晓霞, 薛晨晨, 等. 大豆耐盐基因GmHAL3a的克隆及RNAi载体的构建[J]. (article.aspx?type=view&id=201301003) *大豆科学*, 2013, 32(01):12. [doi:10.3969/j.issn.1000-9841.2013.01.004]
- WANG Ming-xia, CUI Xiao-xia, XUE Chen-chen, et al. Cloning of Halotolerance 3 Gene and Construction of Its RNAi Vector in Soybean (*Glycine max*) [J]. *Soybean Science*, 2013, 32(01):12. [doi:10.3969/j.issn.1000-9841.2013.01.004]
- [4] 张春宝, 李玉秋, 彭宝, 等. 线粒体ISSR与SCAR标记鉴定大豆细胞质雄性不育系与保持系[J]. (article.aspx?type=view&id=201301005) *大豆科学*, 2013, 32(01):19. [doi:10.3969/j.issn.1000-9841.2013.01.005]
- ZHANG Chun-bao, LI Yu-qiu, PENG Bao, et al. Identification of Soybean Cytoplasmic Male Sterile Line and Maintainer Line with Mitochondrial ISSR and SCAR Markers [J]. *Soybean Science*, 2013, 32(01):19. [doi:10.3969/j.issn.1000-9841.2013.01.005]
- [5] 卢清瑶, 赵琳, 李冬梅, 等. RAV基因对拟南芥和大豆不定芽再生的影响[J]. (article.aspx?type=view&id=201301006) *大豆科学*, 2013, 32(01):23. [doi:10.3969/j.issn.1000-9841.2013.01.006]
- LU Qing-yao, ZHAO Lin, LI Dong-mei, et al. Effects of RAV gene on Shoot Regeneration of *Arabidopsis* and Soybean [J]. *Soybean Science*, 2013, 32(01):23. [doi:10.3969/j.issn.1000-9841.2013.01.006]
- [6] 杜景红, 刘丽君. 大豆fad3c基因沉默载体的构建[J]. (article.aspx?type=view&id=201301007) *大豆科学*, 2013, 32(01):28. [doi:10.3969/j.issn.1000-9841.2013.01.007]
- DU Jing-hong, LIU Li-jun. Construction of fad3c Gene Silencing Vector in Soybean [J]. *Soybean Science*, 2013, 32(01):28. [doi:10.3969/j.issn.1000-9841.2013.01.007]
- [7] 张力伟, 樊颖伦, 牛腾飞, 等. 大豆“冀黄13”突变体筛选及突变体库的建立[J]. (article.aspx?type=view&id=201301008) *大豆科学*, 2013, 32(01):33. [doi:10.3969/j.issn.1000-9841.2013.01.008]
- ZHANG Li-wei, FAN Ying-lun, NIU Teng-fei, et al. Screening of Mutants and Construction of Mutant Population for Soybean Cultivar “Jihuang13” [J]. *Soybean Science*, 2013, 32(01):33. [doi:10.3969/j.issn.1000-9841.2013.01.008]
- [8] 盖江南, 张彬彬, 吴瑶, 等. 大豆不定胚悬浮培养基因型筛选及基因枪遗传转化的研究[J]. (article.aspx?type=view&id=201301009) *大豆科学*, 2013, 32(01):38. [doi:10.3969/j.issn.1000-9841.2013.01.009]
- GAO Jiang-nan, ZHANG Bin-bin, WU Yao, et al. Screening of Soybean Genotypes Suitable for Suspension Culture with Adventitious Embryos and Genetic Transformation by Particle Bombardment [J]. *Soybean Science*, 2013, 32(01):38. [doi:10.3969/j.issn.1000-9841.2013.01.009]
- [9] 王鹏飞, 刘丽君, 唐晓飞, 等. 适于体细胞胚发生的大豆基因型筛选[J]. (article.aspx?type=view&id=201301010) *大豆科学*, 2013, 32(01):43. [doi:10.3969/j.issn.1000-9841.2013.01.010]
- WANG Peng-fei, LIU Li-jun, TANG Xiao-fei, et al. Screening of Soybean Genotypes Suitable for Somatic Embryogenesis [J]. *Soybean Science*, 2013, 32(01):43. [doi:10.3969/j.issn.1000-9841.2013.01.010]
- [10] 刘德兴, 年海, 杨存义, 等. 耐酸铝大豆品种资源的筛选与鉴定[J]. (article.aspx?type=view&id=201301011) *大豆科学*, 2013, 32(01):46. [doi:10.3969/j.issn.1000-9841.2013.01.011]
- LIU De-xing, NIAN Hai, YANG Cun-yi, et al. Screening and Identifying Soybean Germplasm Tolerant to Acid Aluminum [J]. *Soybean Science*, 2013, 32(01):46. [doi:10.3969/j.issn.1000-9841.2013.01.011]
- [11] 李凯, 刘志涛, 李海朝, 等. 国家大豆区域试验品种对SMV和SCN抗性分析[J]. (article.aspx?type=view&id=201305019) *大豆科学*, 2013, 32(05):670. [doi:10.11861/j.issn.1000-9841.2013.05.0670]
- LI Kai, LIU Zhi-tao, LI Hai-chao, et al. Resistance to Soybean Mosaic Virus and Soybean Cyst Nematode of Soybean Cultivars from China National Soybean Uniform Trials [J]. *Soybean Science*, 2013, 32(05):670. [doi:10.11861/j.issn.1000-9841.2013.05.0670]
- [12] 王大刚, 田震, 李凯, 等. 豫鲁皖大豆产区大豆花叶病毒株系的鉴定及动态变化分析[J]. (article.aspx?type=view&id=201306016) *大豆科学*, 2013, 32(06):806. [doi:10.11861/j.issn.1000-9841.2013.06.0806]
- [13] 张雯娜, 李晋玉, 田金艳, 等. 逆转录环介导等温扩增技术快速检测大豆花叶病毒[J]. (article.aspx?type=view&id=201403023) *大豆科学*, 2014, 33(03):422. [doi:10.11861/j.issn.1000-9841.2014.03.0422]
- ZHANG Wen-na, LI Jin-yu, TIAN Jin-yan, et al. Rapid Detection of Soybean Mosaic Virus by Reverse Transcription Loop Mediated Isothermal Amplification [J]. *Soybean Science*, 2014, 33(03):422. [doi:10.11861/j.issn.1000-9841.2014.03.0422]
- [14] 李凯, 夏迎春, 王大刚, 等. 黑龙江省大豆花叶病毒(SMV)株系的动态变化分析[J]. (article.aspx?type=view&id=201406017) *大豆科学*, 2014, 33(06):880. [doi:10.11861/j.issn.1000-9841.2014.06.0880]
- LI Kai, XIA Ying-chun, WANG Da-gang, et al. Analysis of Dynamic Change of Soybean Mosaic Virus Strains in Heilongjiang Province of China [J]. *Soybean Science*, 2014, 33(06):880. [doi:10.11861/j.issn.1000-9841.2014.06.0880]
- [15] 张轸, 等. 大豆花叶病毒引发大豆症状类型的研究[J]. (article.aspx?type=view&id=201506016) *大豆科学*, 2015, 34(06):1011. [doi:10.11861/j.issn.1000-9841.2015.06.1011]
- ZHANG Kai, REN Rui, et al. The Symptoms Types in Soybean Leaves Caused by Soybean Mosaic Virus [J]. *Soybean Science*, 2015, 34(06):1011. [doi:10.11861/j.issn.1000-9841.2015.06.1011]
- [16] 宋奕培, 高乐, 刘志涛, 等. 大豆花叶病毒成株抗性及种粒抗性的鉴定[J]. (article.aspx?type=view&id=201506017) *大豆科学*, 2015, 34(06):1015. [doi:10.11861/j.issn.1000-9841.2015.06.1015]
- SONG Ying-pei, GAO Le, LIU Zhi-tao, et al. Evaluation of Adult Resistance and Soybean Seed Resistance to Soybean Mosaic Virus [J]. *Soybean Science*, 2015, 34(06):1015. [doi:10.11861/j.issn.1000-9841.2015.06.1015]
- [17] 刘丽君, 吴俊江, 高明杰, 等. SMV侵染对大豆内源激素平衡的影响[J]. (article.aspx?type=view&id=200004006) *大豆科学*, 2000, 19(04):326. [doi:10.11861/j.issn.1000-9841.2000.04.0326]
- [J]. *Soybean Science*, 2000, 19(04):326. [doi:10.11861/j.issn.1000-9841.2000.04.0326]
- [18] 黄志平, 李杰坤, 王维虎, 等. 大豆新品系抗SMV鉴定及其抗性来源分析[J]. (article.aspx?type=view&id=201704017) *大豆科*

学, 2017, 36(04):598. [doi:10.11861/j.issn.1000-9841.2017.04.0598]

HUANG Zhi-ping, LI Jie-kun, WANG Wei-hu, et al. Identification of Resistance and Preliminary Analysis of Resistance Sources for the Soybean Mosaic Virus in New Soybean Lines[J]. Soybean Science, 2017, 36(01):598.

[doi:10.11861/j.issn.1000-9841.2017.04.0598]

[19] 张恩柱, 赵伟, 张淋淋, 等. 大豆花叶病毒侵染性克隆研究进展[J]. (article.aspx?type=view&id=201705023) 大豆科学, 2017, 36(05):808. [doi:10.11861/j.issn.1000-9841.2017.05.0808]

ZHANG En-zhu, ZHAO Wei, ZHANG Lin-lin, et al. Advances in Infectious Cloning of Soybean Mosaic Virus[J]. Soybean Science, 2017, 36(01):808. [doi:10.11861/j.issn.1000-9841.2017.05.0808]

[20] 王大刚, 陈圣男, 李杰坤, 等. 大豆品系抗SMV评价及亲本来源分析[J]. (article.aspx?type=view&id=201805001) 大豆科学, 2018, 37(05):657. [doi:10.11861/j.issn.1000-9841.2018.05.0657]

WANG Da-gang, CHEN Sheng-nan, LI Jie-kun, et al. Lines to Soybean Mosaic Virus[J]. Soybean Science, 2018, 37(01):657. [doi:10.11861/j.issn.1000-9841.2018.05.0657]

备注/Memo 基金项目: 国家自然科学基金(30571176), 973项目(2004CB117203), 长江学者和创新团队发展计划
作者简介: 郭东全(1979-), 男, 硕士, 现在吉林省农业科学院工作, 从事大豆遗传转化研究。

更新日期/Last Update: 2014-10-21

版权所有 © 2012 黑龙江省农科院信息中心
黑ICP备11000329号-2