

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 返回主页
(/Corp/10.aspx) (/Corp/3600.aspx) (/Corp/5006.aspx) (/Corp/50.aspx) (http://www.haasep.cn/)

«上一篇 (DArticle.aspx?type=view&id=201203006)
下一篇 (DArticle.aspx?type=view&id=201203008)



PDF下载 (pdfdown.aspx?)

Sid=201203007)

+分享

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



微信公众号: 大豆科学

[1] 吴禹, 沈军, 陈爱国, 等. 辽宁省野生大豆资源遗传多样性的比较分析[J]. 大豆科学, 2012, 31(03): 368-373. [doi:10.3969/j.issn.1000-9841.2012.03.007]
WU Yu, SHEN Jun, CHEN Ai-guo, et al. Genetic Similarity for Wild Soybeans from Different Geographical Origins in Liaoning Province[J]. Soybean Science, 2012, 31(03): 368-373. [doi:10.3969/j.issn.1000-9841.2012.03.007]

点击复制

辽宁省野生大豆资源遗传多样性的比较分析

《大豆科学》 [ISSN:1000-9841 /CN:23-1227/S] 卷: 第31卷 期数: 2012年03期 页码: 368-373 栏目: 出版日期: 2012-03-25

Title: Genetic Similarity for Wild Soybeans from Different Geographical Origins in Liaoning Province

文章编号: 1000-9841 (2012) 03-0368-06

作者: 吴禹 (KeySearch.aspx?type=Name&Sel=吴禹); 沈军 (KeySearch.aspx?type=Name&Sel=沈军); 陈爱国 (KeySearch.aspx?type=Name&Sel=陈爱国); 王岩 (KeySearch.aspx?type=Name&Sel=王岩); 李兆波 (KeySearch.aspx?type=Name&Sel=李兆波); 孟未来 (KeySearch.aspx?type=Name&Sel=孟未来); 崔晓光 (KeySearch.aspx?type=Name&Sel=崔晓光); 路明祥 (KeySearch.aspx?type=Name&Sel=路明祥)

辽宁省农业科学院 创新中心, 辽宁 沈阳 110866

Author(s): WU Yu (KeySearch.aspx?type=Name&Sel=WU Yu); SHEN Jun (KeySearch.aspx?type=Name&Sel=SHEN Jun); CHEN Ai-guo (KeySearch.aspx?type=Name&Sel=CHEN Ai-guo); WANG Yan (KeySearch.aspx?type=Name&Sel=WANG Yan); LI Zhao-bo (KeySearch.aspx?type=Name&Sel=LI Zhao-bo); MENG Wei-lai (KeySearch.aspx?type=Name&Sel=MENG Wei-lai); CUI Xiao-guang (KeySearch.aspx?type=Name&Sel=CUI Xiao-guang); LU Ming-xiang (KeySearch.aspx?type=Name&Sel=LU Ming-xiang)

Innovation Center, Liaoning Academy of Agricultural Sciences, Shenyang 110866, Liaoning, China

关键词: 野生大豆 (KeySearch.aspx?type=Keyword&Sel=野生大豆); 遗传多样性 (KeySearch.aspx?type=Keyword&Sel=遗传多样性); 遗传相似性 (KeySearch.aspx?type=Keyword&Sel=遗传相似性); 聚类分析 (KeySearch.aspx?type=Keyword&Sel=聚类分析); SSR (KeySearch.aspx?type=Keyword&Sel=SSR)

Keywords: Wild soybean (KeySearch.aspx?type=Keyword&Sel=Wild soybean); Genetic diversity (KeySearch.aspx?type=Keyword&Sel=Genetic diversity); Genetic similarity (KeySearch.aspx?type=Keyword&Sel=Genetic similarity); Cluster analysis (KeySearch.aspx?type=Keyword&Sel=Cluster analysis); SSR (KeySearch.aspx?type=Keyword&Sel=SSR)

分类号: S565.1

DOI: 10.3969/j.issn.1000-9841.2012.03.007 (http://dx.doi.org/10.3969/j.issn.1000-9841.2012.03.007)

文献标志码: A

摘要: 利用20对SSR引物对来自辽宁省14个地级市的963份野生大豆种质进行了遗传多态性分析。结果共检测到等位基因变异141个, 每对引物等位基因变异范围4~11个。等位基因的平均频率是0.1326, 范围是0.0016~0.9045。各地区间遗传相似度变幅为0.6730~0.8589, 其中沈阳和铁岭的遗传相似性最大; 其次是大连和鞍山、辽阳和鞍山; 丹东和朝阳、抚顺和大连的遗传相似性最低。聚类分析中, 14个地区共分为2个大类和4个小类, 表明材料的遗传背景与地理分布具有一定的相关性。

Abstract: The genetic diversity of 963 wild soybean germplasms from 14 regions in Liaoning province was analyzed using 20 pairs of SSR primers. A total of 141 variation were detected in alleles with the frequency of 4-11 per pair of primer. The averaged frequency of allele was 0.1326 in the range of 0.0016-0.9045. The genetic similarity index of wild soybeans in different regions varied from 0.6730 to 0.8589, with that between Shenyang and Tieling the highest; followed by Dalian and Anshan, Liaoyang and Anshan; Dandong and Chaoyang, Fushun and Dalian was the smallest. The 14 areas were divided into 2 major categories and 4 sub-categories in clustering analysis, which showed that the genetic background of germplasm was correlated to its geographical distribution to some extent.

参考文献/References:

- [1] 董英山. 中国野生大豆研究进展[J]. 吉林农业大学学报, 2008, 30(4): 394-400. (Dong Y S. Advances of research on wild soybean in China[J]. Journal of Jilin Agricultural University, 2008, 30(4): 394-400.)
- [2] 王志友, 王昌陵, 董丽杰, 等. 辽宁省野生大豆种质资源及利用现状[J]. 杂粮作物, 2008(4): 241-243. (Wang Z Y, Wang C L, Dong L J, et al. Germplasm resources and utilization of wild soybean in Liaoning province[J]. Rain Fed Crops, 2008(4): 241-243.)
- [3] Lee J D, Yu J K, Hwang Y H, et al. Genetic diversity of wild soybean (Glycine soja Sieb. and Zucc.) accessions from south Korea and other countries crop[J]. Crop Science, 2008, 48(2): 606-616.
- [4] 董英山, 庄炳昌, 赵丽梅, 等. 中国野生大豆遗传多样性中心[J]. 作物学报, 2000, 26(5): 521-527. (Dong Y S, Zhuang B C, Zhao L M, et al. The genetic diversity centers of annual wild soybean in China[J]. Acta Agronomica Sinica, 2000, 26(5): 521-527.)
- [5] 丁艳来, 赵团结, 盖钧铭. 中国野生大豆的遗传多样性和生态特异性分析[J]. 生物多样性, 2008, 16(2): 133-142. (Ding Y L, Zhao T J, Gai J Y. Genetic diversity and ecological differentiation of Chinese annual wild soybean (Glycine soja [J]. Biodiversity Science, 2008, 16(2): 133-142.)

- [6] 关媛, 鄂文弟, 王丽侠, 等. 以湖南和湖北大豆为例分析影响遗传多样性评价的因素[J]. 作物学报, 2007, 33(3):461-468. (Guan Y, E W D, Wang L X, et al. Analysis of factors influencing the genetic diversity evaluation using two soybean [Glycine max (L.) Merr.] collections from Hunan and Hubei [J]. Acta Agronomica Sinica, 2007, 33(3):461-468.)
- [7] 王果, 胡正, 张保缺, 等. 山西省野生大豆资源遗传多样性分析[J]. 中国农业科学, 2008, 41(7):2182-2190. (Wang G, Hu Z, Zhang B Q, et al. Genetic diversity analysis of Shanxi's wild soybean (Glycine soja) [J]. Scientia Agricultura Sinica, 2008, 41(7):2182-2190.)
- [8] Murray M G, Thompson W F. Rapid isolation of high molecular weight plant DNA [J]. Nucleic Acids Research, 1980, 8(19):4321-4325. [L.L.]
- [9] Xie H, Chang R Z, Cao Y S, et al. Selection of core SSR loci by using Chinese autumn soybean [J]. Scientia Agriculture Sinica, 2003, 36(4):360-366.
- [10] 高慧. 北方沿海滩涂野生大豆资源的收集与其遗传多样性的SSR分析[D]. 呼和浩特: 内蒙古农业大学, 2008:22. (Gao H. Collection and genetic diversity of the northern coastal wild soybean by SSR [D]. Hohhot: Inner Mongolia Agricultural University, 2008:22.)
- [11] 李建东, 燕雪飞, 董思言, 等. 辽宁省野生大豆种质资源的SSR遗传多样性分析[J]. 大豆科学, 2010, 29(1):28-32. (Li J D, Yan X F, Dong S Y, et al. Analysis of genetic diversity of Glycine soja germplasm resources in Liaoning province [J]. Soybean Science, 2010, 29(1):28-32.)
- [12] 严茂粉, 李向华, 王克晶. 北京地区野生大豆种群SSR标记的遗传多样性评价[J]. 植物生态学报, 2008, 32(4):938-950. (Yan M F, Li X H, Wang K J, et al. Evaluation of genetic diversity by SSR markers for natural populations of wild soybean growing in the region of Beijing, China [J]. Journal of Plant Ecology, 2008, 32(4):938-950.)
- [13] 王丹, 乔亚科, 韩粉霞, 等. 河北东部沿海地区野生大豆SSR多样性分析[J]. 大豆科学, 2010, 29(4):555-558. (Wang D, Qiao Y K, Han F X, et al. Genetic diversity of Glycine soja in eastern coastal area of Hebei province [J]. Soybean Science, 2010, 29(4):555-558.)
- [14] 李向华, 田子罡, 李福山, 等. 考察新收集野生大豆与已保存野生大豆的遗传多样性比较[J]. 植物遗传资源学报, 2003, 4(4):345-349. (Li X H, Tian Z G, Li F S, et al. Genetic analysis of newly collected wild soybean materials and conserved germplasm collected from the same places [J]. Journal of Plant Genetic Resources, 2003, 4(4):345-349.)
- [15] 海林, 王克晶, 杨凯. 半野生大豆种质资源SSR位点遗传多样性分析[J]. 西北植物学报, 2002, 22(4):751-757. (Hai L, Wang K J, Yang K, et al. Genetic diversity of semi-wild soybean using SSR markers [J]. Acta Botanica Boreali-occidentalia Sinica, 2002, 22(4):751-757.)
- [16] 陈辉, 张磊, 张文明, 等. 安徽省新收集野生大豆种质资源的SSR分析[J]. 中国农学通报, 2008, 24(3):345-349. (Chen H, Zhang L, Zhang W M, et al. SSR analysis of newly collected wild soybean germplasm from Anhui province [J]. Chinese Agricultural Science Bulletin, 2008, 24(3):345-349.)

undefined

undefined

相似文献/References:

- [1] 高越, 刘辉, 陶波. 抗草甘膦野生大豆筛选及其抗性生理机制研究[J]. (article.aspx?type=view&id=201301018) 大豆科学, 2013, 32(01):76. [doi:10.3969/j.issn.1000-9841.2013.01.018]
- GAO Yue, LIU Hui, TAO Bo. Screening and Physiological Mechanisms of Resistance to Glyphosate in Wild Soybeans (Glycine soja) [J]. Soybean Science, 2013, 32(03):76. [doi:10.3969/j.issn.1000-9841.2013.01.018]
- [2] 何?琳, 刘业丽, 裴宇峰, 等. 2012年黑龙江垦区大豆参试品系纯度鉴定、分子ID构建及遗传多样性分析[J]. (article.aspx?type=view&id=201305003) 大豆科学, 2013, 32(05):591. [doi:10.11861/j.issn.1000-9841.2013.05.0591]
- HE Lin, LIU Ye-li, PEI Yu-feng, et al. Purity Identification, Molecular ID Establishment and Genetic Diversity Analysis of Soybeans Attending Heilongjiang Reclamation Regional Test in 2012 [J]. Soybean Science, 2013, 32(03):591. [doi:10.11861/j.issn.1000-9841.2013.05.0591]
- [3] 王军卫, 侯立江, 李?登, 等. 野生大豆紫色酸性磷酸酶PAP1基因的克隆及分析[J]. (article.aspx?type=view&id=201305004) 大豆科学, 2013, 32(05):596. [doi:10.11861/j.issn.1000-9841.2013.05.0596]
- WANG Jun-wei, HOU Li-jiang, LI Deng, et al. Cloning and Sequence Analysis of Purple Acid Phosphatase PAP1 Gene in Wild Soybean [J]. Soybean Science, 2013, 32(03):596. [doi:10.11861/j.issn.1000-9841.2013.05.0596]
- [4] 王军卫, 侯立江, 李?登, 等. 野生大豆紫色酸性磷酸酶PAP1基因的克隆及分析[J]. (article.aspx?type=view&id=201305004) 大豆科学, 2013, 32(05):596.
- WANG Jun-wei, HOU Li-jiang, LI Deng, et al. Cloning and Sequence Analysis of Purple Acid Phosphatase PAP1 Gene in Wild Soybean [J]. Soybean Science, 2013, 32(03):596.
- [5] 王丽燕. 硅对野生大豆幼苗耐盐性的影响及其机制研究[J]. (article.aspx?type=view&id=201305017) 大豆科学, 2013, 32(05):659. [doi:10.11861/j.issn.1000-9841.2013.05.0659]
- WANG Li-yan. Effects of Silicon on Salt Tolerance of Glycine soja Seedlings and Its Mechanism [J]. Soybean Science, 2013, 32(03):659. [doi:10.11861/j.issn.1000-9841.2013.05.0659]
- [6] 王卫卫, 关大伟, 马鸣超, 等. 东北地区大豆根瘤菌遗传多样性与系统发育研究[J]. (article.aspx?type=view&id=20130401) 大豆科学, 2013, 32(04):433. [doi:10.11861/j.issn.1000-9841.2013.04.0433]
- WANG Wei-wei, GUAN Da-wei, MA Ming-chao, et al. Genetic Diversity and Phylogeny of Soybean Rhizobia Isolated from Northeast China [J]. Soybean Science, 2013, 32(03):433. [doi:10.11861/j.issn.1000-9841.2013.04.0433]
- [7] 陈丽丽, 王明玖, 何丽君, 等. 野生大豆ISSR体系的优化及其在远缘杂交后代鉴定中的利用[J]. (article.aspx?type=view&id=20130406) 大豆科学, 2013, 32(04):459. [doi:10.11861/j.issn.1000-9841.2013.04.0459]
- CHEN Li-li, WANG Ming-jiu, HE Li-jun, et al. Optimization for ISSR Reaction System of Wild Soybean and Its Utilization in Distant Hybrid Identification [J]. Soybean Science, 2013, 32(03):459. [doi:10.11861/j.issn.1000-9841.2013.04.0459]
- [8] 郑世英, 萧蓓蓓, 金桂芳. NaCl胁迫对野生大豆和栽培大豆叶绿素及光合特性的影响[J]. (article.aspx?type=view&id=20130411) 大豆科学, 2013, 32(04):486. [doi:10.11861/j.issn.1000-9841.2013.04.0486]
- ZHENG Shi-ying, XIAO Bei-Bei, JIN Gui-fang. Effect of NaCl Stress on Chlorophyll Content and Photosynthetic Characteristics of Glycine soja and Glycine max [J]. Soybean Science, 2013, 32(03):486. [doi:10.11861/j.issn.1000-9841.2013.04.0486]

- [9]陈丽丽,刘晓冬,赵洪银,等.福建涠洲岛烟豆(*G. tabacina*)遗传多样性分析[J]. (darticle.aspx?type=view&id=201303002)大豆科学,2013,32(03):286. [doi:10.11861/j.issn.1000-9841.2013.03.0286]
CHEN Li-li,LIU Xiao-dong,ZHAO Hong-kun,et al.Genetic Diversity of *G. tabacina* from Meizhou Island of Fujian Province[J].Soybean Science,2013,32(03):286. [doi:10.11861/j.issn.1000-9841.2013.03.0286]
- [10]徐艳平,胡翠美,张文会,等.干旱胁迫对野生大豆幼苗光合作用相关指标的影响[J]. (darticle.aspx?type=view&id=201303013)大豆科学,2013,32(03):341. [doi:10.11861/j.issn.1000-9841.2013.03.0341]
XU Yan-ping,HU Cui-mei,ZHANG Wen-hui,et al.Effect of Simulated Drought Stress on Photosynthesis Related Indexes at Seedling Stage of Wild Soybeans[J].Soybean Science,2013,32(03):341. [doi:10.11861/j.issn.1000-9841.2013.03.0341]
- [11]袁翠平,赵洪银,王玉民,等.利用SSR标记评价抗胞囊线虫野生大豆种质的遗传多样性[J]. (darticle.aspx?type=view&id=201402001)大豆科学,2014,33(02):147. [doi:10.11861/j.issn.1000-9841.2014.02.0147]
YUAN Cui-ping,ZHAO Hong-kun,WANG Yu-min,et al.Genetic Diversity of Wild Soybean(*Glycine soja*)Resistant Germplasm to Soybean Cyst Nematode Revealed by SSR Markers[J].Soybean Science,2014,33(03):147. [doi:10.11861/j.issn.1000-9841.2014.02.0147]
- [12]孙晓环,刘晓冬,赵洪银,等.吉林省龙井原保护区野生大豆遗传多样性分析[J]. (darticle.aspx?type=view&id=201203005)大豆科学,2012,31(03):358. [doi:10.3969/j.issn.1000-9841.2012.03.005]
SUN Xiao-huan,LIU Xiao-dong,ZHAO Hong-kun,et al.Genetic Diversity of Wild Soybean(*G. soja*)from Longjing in-situ Conserved Region of Jilin Province[J].Soybean Science,2012,31(03):358. [doi:10.3969/j.issn.1000-9841.2012.03.005]
- [13]曾维英,梁江,陈渊,等.广西新收集野生大豆资源的遗传多样性分析[J]. (darticle.aspx?type=view&id=201103006)大豆科学,2011,30(03):379. [doi:10.11861/j.issn.1000-9841.2011.03.0379]
ZENG Wei-ying,LIANG Jiang,CHEN Yuan,et al.Genetic Diversity Analysis of New Wild Soybean Collection in Guangxi [J].Soybean Science,2011,30(03):379. [doi:10.11861/j.issn.1000-9841.2011.03.0379]
- [14]魏苗,李建东,燕雪飞,等.中国东北野生大豆SSR遗传多样性及亲缘关系分析[J]. (darticle.aspx?type=view&id=201103008)大豆科学,2011,30(03):388. [doi:10.11861/j.issn.1000-9841.2011.03.0388]
WEI Miao,LI Jian-dong,YAN Xue-fei,et al.Analysis of Genetic Diversity and Relationship of *Glycine soja* in Northeast China[J].Soybean Science,2011,30(03):388. [doi:10.11861/j.issn.1000-9841.2011.03.0388]
- [15]李建东,燕雪飞,董思言,等.辽宁省野生大豆种质资源的SSR遗传多样性分析[J]. (darticle.aspx?type=view&id=201001006)大豆科学,2010,29(01):28. [doi:10.11861/j.issn.1000-9841.2010.01.0028]
LI Jian-dong,YAN Xue-fei,DONG Si-yan,et al.Analysis of Genetic Diversity of *Glycine soja* Germplasm Resources in Liaoning Province[J].Soybean Science,2010,29(03):28. [doi:10.11861/j.issn.1000-9841.2010.01.0028]
- [16]王丹,乔亚科,韩粉霞,等.河北东部沿海地区野生大豆SSR多样性分析[J]. (darticle.aspx?type=view&id=201004002)大豆科学,2010,29(04):555. [doi:10.11861/j.issn.1000-9841.2010.04.0555]
WANG Dan,QIAO Ya-ke,HAN Fen-xia,et al.Genetic Diversity of *Glycine soja* in Eastern Coastal Area of Hebei Province[J].Soybean Science,2010,29(03):555. [doi:10.11861/j.issn.1000-9841.2010.04.0555]
- [17]朴向民,张圣珍,许建,等.中国吉林省和韩国野生大豆的遗传多样性及遗传关系分析[J]. (darticle.aspx?type=view&id=200902001)大豆科学,2009,28(02):181. [doi:10.11861/j.issn.1000-9841.2009.02.0181]
PIAO Xiang-min,JANG Seong-jin,HU Gung,et al.Genetic Diversity of Annual Wild Soybean (*Glycine Soja*) between China Jilin Province and Korean[J].Soybean Science,2009,28(03):181. [doi:10.11861/j.issn.1000-9841.2009.02.0181]
- [18]张小明,刘丽君,唐晓飞,等.中俄大豆种质遗传多样性分析[J]. (darticle.aspx?type=view&id=200801003)大豆科学,2008,27(01):15. [doi:10.11861/j.issn.1000-9841.2008.01.0015]
ZHANG Xiao-ming,LIU Li-jun,TANG Xiao-fei,et al.Genetic Diversity of Soybean Germplasm in Russia and China [J].Soybean Science,2008,27(03):15. [doi:10.11861/j.issn.1000-9841.2008.01.0015]
- [19]董思言,孙备,李建东,等.微卫星分子标记在野生大豆遗传多样性研究中的应用[J]. (darticle.aspx?type=view&id=200801028)大豆科学,2008,27(01):145. [doi:10.11861/j.issn.1000-9841.2008.01.0145]
DONG Si-yan,SUN Bei,LI Jian-dong,et al.Application of Microsatellite Molecular Marker in the Genetic Diversity of *Glycine soja*[J].Soybean Science,2008,27(03):145. [doi:10.11861/j.issn.1000-9841.2008.01.0145]
- [20]李学红,程贯召,阚世红,等.白浪河流域新收集野生大豆居群特征及其遗传多样性分析[J]. (darticle.aspx?type=view&id=201406001)大豆科学,2014,33(06):795. [doi:10.11861/j.issn.1000-9841.2014.06.0795]
LI Xue-hong,CHENG Guan-zhao,KAN Shi-hong,et al.Phenotypic Features and Genetic Diversity of Wild Soybean (*Glycine soja*)Germplasm Newly Collected in Bailang River Region[J].Soybean Science,2014,33(03):795. [doi:10.11861/j.issn.1000-9841.2014.06.0795]

备注/Memo 基金项目:公益性行业(农业)科研专项经费资助(201003021)。

第一作者简介:吴禹(1969-),女,研究员,主要从事农作物品种资源研究。E-mail:wuyuheat@163.com。

更新日期/Last Update: 2014-08-16