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[1]谢冬微,韩英鹏,李文滨.不同环境条件下大豆脂肪酸含量与主要农艺性状相关性及通径分析[J].大豆科学,2010,29(03):403-407.[doi:10.11861/j.issn.1000-9841.2010.03.0403]
XIE Dong-wei,HAN Ying-peng,LI Wen-bin.Correlation of Fatty Acid with Major Agronomic Characters of Soybean in Different Environments[J].Soybean Science,2010,29(03):403-407.[doi:10.11861/j.issn.1000-9841.2010.03.0403]
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不同环境条件下大豆脂肪酸含量与主要农艺性状相关性及通径分析

《大豆科学》 [ISSN:1000-9841 /CN:23-1227/S] 卷： 第29卷 期数： 2010年03期 页码： 403-407 栏目：
出版日期： 2010-06-25

Title: Correlation of Fatty Acid with Major Agronomic Characters of Soybean in Different Environments

文章编号： 1000-9841（2010）03-0403-05

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关键词： 大豆亚麻酸 (KeySearch.aspx?type=KeyWord&Sel=大豆亚麻酸)； 脂肪酸 (KeySearch.aspx?type=KeyWord&Sel=脂肪酸)； 农艺性状 (KeySearch.aspx?type=KeyWord&Sel=农艺性状)； 相关性 (KeySearch.aspx?type=KeyWord&Sel=相关性)； 通径分析 (KeySearch.aspx?type=KeyWord&Sel=通径分析)

Keywords: Linolenic acid (KeySearch.aspx?type=KeyWord&Sel=Linolenic acid); Fatty acids (KeySearch.aspx?type=KeyWord&Sel=Fatty acids); Agronomic traits (KeySearch.aspx?type=KeyWord&Sel=Agronomic traits); Correlation coefficients (KeySearch.aspx?type=KeyWord&Sel=Correlation coefficients); Path-coefficients (KeySearch.aspx?type=KeyWord&Sel=Path-coefficients)

分类号： S565.1

DOI: 10.11861/j.issn.1000-9841.2010.03.0403 (http://dx.doi.org/10.11861/j.issn.1000-9841.2010.03.0403)

文献标志码： A

摘要： 通过气相色谱法，对3个不同环境下合丰25（亚麻酸含量7.48%）×父本L-5（亚麻酸含量2.66%）的F_6代重组自交系籽粒的脂肪酸组分含量进行测定。分析了不同地点的5种脂肪酸的相对含量之间以及与主要农艺性状的相关性。结果表明：不同地点重组自交系内5种脂肪酸的相对含量差异显著，且在不同地理条件下脂肪酸的变异系数变化趋势相同。油酸，亚油酸和亚麻酸之间的相关关系很稳定，均为亚油酸与亚麻酸呈显著正相关，而油酸与二者都呈极显著负相关。亚麻酸与百粒重呈极显著正相关，表明可以利用百粒重对亚麻酸进行间接选择。不同环境条件下脂肪酸含量与百粒重的通径系数不尽相同，说明通过百粒重进行间接选择，只能作为选育低亚麻酸品种的辅助手段。

Abstract: The 126 F_6 Recombinant Inbred Lines(RILs) derived from a cross between Hefeng 25, a soybean cultivar with regular linolenic content, and L-5, a soybean mutant line with only 2.66% linolenic acid, were planted in three ecological environment in Heilongjiang Province, and the five main fatty acid contents of RILs as well as their parents were measured by fatty acid sodium hydroxide-methanol using gas chromatography, to investigate the correlation among the five kind of fatty acids content and with the major agronomic traits. The five major fatty acids of RILs showed steady relationship in different environments. Linoleic acid had significant positive correlation with linolenic acid, while oleic acid had significant negative correlation with both linoleic acid and linolenic acid. Linolenic acid showed significant positive correlation with 100-seed weight, indicating that 100-seed weight can be used for selecting soybean germplasm with proper linolenic acid content indirectly. Path coefficients between fatty acids content and 100-seed weight varied with the planting environments, suggesting that 100-seed weight could only be used as an assistant for selecting low linolenic soybean.

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备注/Memo 基金项目：国家高技术研究发展计划资助项目（2006AA10Z1F1）。
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更新日期/Last Update: 2014-09-13