

研究报告

## 基因型与环境对小麦籽粒蛋白质和淀粉品质的影响

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收稿日期 2004-7-26 修回日期 2005-3-4 网络版发布日期 接受日期

### 摘要

选用山东省近年来已推广和区试的10个冬小麦品种为材料,于2001~2003年在9个不同环境条件的试验点进行两年多点试验,分析了山东省不同地区小麦品质性状特点,依据品质指标将山东省分为4个类型区,并研究了基因型和环境及其互作对小麦主要品质性状的影响.结果表明,品种与环境对小麦主要品质性状指标均有显著影响;蛋白质和面筋百分含量变异的主要原因是环境的差异;粉质仪参数的变异主要是品种和环境的共同作用;而淀粉含量、峰值黏度和稀懈值变异的各影响因素互作效应大于独立效应,在独立效应中,品种影响大于环境影响.

关键词 [基因型,环境,小麦,品质](#)

分类号

## Effects of genotype and environment on protein and starch quality of wheat grain

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### Abstract

A field trial with 10 winter wheat varieties was conducted at 9 locations under different environmental conditions in Shandong Province to study the effects of wheat genotype and environment on the main qualitative characters of wheat grain. The results indicated that variety and environment had a marked influence on the main qualitative indexes of wheat grain, and the difference of environmental conditions was the main factor affecting the protein and gluten contents of the grain. The variation of farinogramme indexes was mainly due to the interaction between variety and environment. As for the starch content, peak viscosity, and breakdown of the grain, interactive effect was stronger than independent one, and the effect of variety was stronger than that of environment.

**Key words** [Genotype](#) [Environment](#) [Wheat](#) [Quality](#)

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