

农学一研究报告

栽培荞麦种子醇溶蛋白遗传多样性分析

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摘要:

利用A-PAGE (Acid-polyacrylamide gel electrophoresis) 对来源于7个国家的76份栽培荞麦(苦荞54份, 甜荞22份) 醇溶蛋白遗传多样性进行评价。结果表明, 荞麦醇溶蛋白位点存在丰富的等位变异, 共分离出18条迁移率不同的谱带, 每份材料具有6~12条不等, 平均9.5条, 多态性带占88.89%。材料间平均遗传相似系数(GS) 为0.777, 变幅为0.389~1.000。在GS为0.63的水平上供试材料可聚为苦荞和甜荞两大类, 绝大部分来自于相同或相似生态地理环境的材料聚成一类, 表明荞麦醇溶蛋白所揭示的遗传关系与地理来源有较高的相关性。

关键词: A-PAGE

Analysis on Genetic Diversity of Seeds Prolamine in Cultivated Buckwheat

Abstract:

The genetic diversity of prolamine among 76 cultivated buckwheat accessions (55 accessions of tartary buckwheat, 21 accessions of common buckwheat) from 7 countries were analyzed by A-PAGE. A total of 18 prolamine bands were separated by electrophoresis. The abundant variations of prolamine were observed, and 18 prolamine bands were detected, ranging from 6 to 12 bands per accession with the average of 9.5, among which 88.89% bands were polymorphic. The genetic similarity (GS) varied from 0.389 to 1.000, with the average of 0.777. The cluster analysis showed that all the accessions could be clustered into two groups at GS=0.63 level, tartary buckwheat and common buckwheat. Moreover, the accessions from the same origin frequently could be divided into one group, which indicated that there was a significantly positive correlation between genetic differentiation and geographical habits among the cultivated buckwheat.

Keywords: A-PAGE

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