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二棱大麦和杂种的β-淀粉酶同工酶研究

林亚康, 张毓芳, 俞志隆

杭州大学生物小系，310012

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摘要 用水和木反蛋白酶提取的两种大麦β-淀粉酶同工酶在薄层等电聚集电泳中能分辨出30条酶 带，它们的pI在4.4—6.5之间，可以分成3个区（Ⅰ、Ⅱ、Ⅲ区）。水提取的游离态β-淀粉 酶同工酶主要集中在Ⅰ区。而用木瓜蛋白酶提取的总β-淀粉酶同工酶主要分布在Ⅱ、Ⅲ 区，Ⅰ区较少，它的分布区域与游离态酶的活性有关。37个二棱大麦品种的β-淀粉酶活性 差异较大，但根据同工酶的电泳图谱可以分成两种类型，即Ⅰ型和Ⅱ型，两者在酶带数和分 布上都有差异。 同一类型的不同品种之间杂交后，酶活性出现明显的杂种优势，但期同工酶的电泳图谱不发生改变。 对β-淀汾酶同工酶电泳类型的多型性及高β-淀粉酶活性在育种上的应用作了简要讨论 。

关键词 β-淀粉酶,同工酶,大麦

分类号

Studies of P-Amylase Isozyme in Mature Grains of Two-rowed Barleyand Its Hybrids

Lin Yakang Zhang Yufang Yu Zhilong

(Dept. of Biology, Hangzhou University, 310012

Abstract

0-amylase activity and isozyme electrophoretic forms in 37 two-rowed barley cultivars were studied. Thirty日-amylase isozyme bands could be separated by isoelectric focussing, and they mighe be divided into three zones（zone 1, I t and 111). Two types（type I and II) of isozymes could be distinguished in two-rowed barley cultivars used in this study according to }-amylase electrophoretic patterns, and it is showed to be associated with the proportion of free to total 0-amylase. 日-amylase activity in F₁ and F, hybrids showed obvious hybrid vigor, but isozymograms of hybrids were the same as their parents. The 0-amylase polymorphisms in rest grains of·barley and the application of the culri-I vars with high P-amylase activity in breeding were briefly discussed.

Key words 0-amylase Isozyme Barley

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通讯作者