

Genetic Analysis of Parthenocarpy in Eggplant

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Abstract: The combining abilities, heritability, correlation, aggression, and path for parthenocarpy were analyzed according to 10 hybrid crosses made between 3 parthenocarpic lines and 2 non-parthenocarpic lines of eggplant with half mating design. The results showed that the heredity of parthenocarpy was not correspondent with the additive-dominant model. Parthenocarpy was maybe controlled by a group of recessive genes as well as influenced by epistasis effect.

Key words: Eggplant; Parthenocarpy; Genetic analysis

类番茄茄材料耐冷性的差异

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Difference on the Cold Tolerance of *Solanum lycopersicoides*

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关键词: 类番茄茄; 电解质外渗; 耐冷性

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利用 HPG-250 型 (哈尔滨产) 人工气候箱, 对 5 份类番茄茄 (*Solanum lycopersicoides*)、1 份多毛番茄 (*L. hirsutum*) 和 1 份普通番茄 (*L. esculentum*) 材料 (6~7 片真叶) 进行 6℃/2℃ (昼/夜) 和 25℃/15℃ (作无逆境对照) 处理 72 h, 光周期 12 h (昼 12 h/夜 12 h), 每处理 6 株, 3 次重复。然后用日本产 Mc26 型电导仪测定电导率。以相对电解质渗出率和细胞膜伤害率衡量材料的耐冷性。细胞膜伤害率 (%) = (处理电导率值 - 对照电导率值) / (处理煮沸后总电导率值 - 对照电导率值) × 100。

测定结果 (表 1) 表明, 7 份材料经 6℃/2℃ 胁迫后, 相对电解质渗出率介于 9.32% ~ 15.70%, 并有 UC82B > L06126 > *S. lycopersicoides* 的趋势; 25℃/15℃ 处理各材料间虽有差异但无规律。6℃/2℃ 胁迫下细胞膜伤害率介于 3.61% ~ 10.12%, 除 LA2730、LA2951 和 L06126 间无显著差异外, 其他材料间差异极显著, 并有 UC82B > L06126 > *S. lycopersicoides* 的趋势。可见, 类番茄茄表现出比普通番茄属中耐冷性较强的多毛番茄还耐低温。5 份类番茄茄材料在低温胁迫下细胞膜的伤害率也存在明显差异, 因此, 用类番茄茄改良番茄耐冷时应注意材料间的差异。

表 1 低温胁迫 72 h 类番茄茄和番茄相对电解质渗出率和细胞膜伤害率

Table 1 Treated at low temperature (72 h) relative electrolyte effusive rate and membrane damage rate (%)

材 料 Materials	相对电解质渗出率 Relative electrolyte effusive rate		细胞膜伤害率 Membrane damage rate
	6℃/2℃	25℃/15℃	6℃/2℃
类番茄茄 <i>S. lycopersicoides</i>			
LA1990	10.3764 CDode	7.0882 BCc	4.8053 Dd
LA2386	10.0899 CDde	8.8536 ABab	3.6142 Ee
LA2730	11.7856 BCc	7.6933 Bbc	7.1930 Bb
LA2776	9.3176 De	5.5579 Cd	6.0561 Cc
LA2951	11.0035 CDcd	7.9975 Bbc	7.3768 Bb
多毛番茄 <i>L. hirsutum</i>			
'L06126'	13.6608 ABb	9.8843 Aa	7.0655 Bb
番茄 <i>L. esculentum</i>			
'UC82B'	15.7046 Aa	7.8064 Bbc	10.1152 Aa

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