

农学—研究报告

甘蔗早花亲本断夜处理效果研究

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摘要:

探讨断夜处理对延迟甘蔗早花亲本开花的效果,于2006、2007和2008年分别进行不同光照强度的断夜处理试验。结果表明,参试品系CP85-1491和HoCP93-746在L3、L4处理下及其他品系在各处理下的花期在杂交授粉期间,抽穗率、始花期、延迟开花天数和开花高峰期等各考察指标均适合杂交制种需要;各年份下,随着光照强度的增强,各参试材料的始花期和延迟开花天数逐渐增加,开花高峰期逐渐推迟,抽穗率也随之下降;相同年份下各处理,不同参试材料的始花期、延迟开花天数和抽穗率差异较大,随着光照强度的增强,同一参试材料的始花期、延迟开花天数、终花期和抽穗率年份间差异有逐渐加大的趋势;而开花持续期平均约1个月左右,并不受光照强度的影响。多数早花亲本在10.5~105 lx的光照强度范围易得到较好的延迟开花效果,该研究为目前甘蔗种质创新和杂交花穗生产提供技术支持和理论依据。

关键词: 延迟开花

Effects of Night Breaks on the Delayed Flowering in Sugarcane

Abstract:

The aim of this research was to discuss the effect of night-break treatment on flowering of sugarcane in different strain and year. Experiments about different light intensity of night-break were conducted to study the effects of night-break on sugarcane's flowering in 2006, 2007 and 2008. The results showed that delaying the flowering date for most early-flowering clones by all treatment was successful; for those tested strains, under the night-break treatment each year, with the increase of light intensity, the initial flowering date was delayed, the date of flowering in peak was postponed, the heading rate was declined; in the same year, for different clone, their beginning date of flowering, delayed days of the flowering and heading rate were very different; with the increase of light intensity, for the same clone on test, the beginning date of the flowering, the delayed days of the flowering, and the heading rate, had a trend of increasing difference among these years; the flowering time sustain for about a month, and it wasn't impacted by different light intensity. For most early-flowering clones, the range of light intensity from 10.5~105 lx was effective to delay flowering time. This research would provide technical support and theoretical basis for sugarcane germplasm innovation and crossed fuzz production.

Keywords: delay the flowering

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