

‘地平线’天竺葵的花芽分化及光周期特性

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Floral Bud Differentiation and *Photoperiodic Characteristics* of *Pelargonium hortorum* ‘Horizon’

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摘要 为了研究‘地平线’天竺葵的花芽分化特性及光周期对其生长发育的影响, 采用石蜡切片方法观察了花芽分化的过程, 探讨了7种光周期处理对始花期及开花质量的影响。结果表明: (1) ‘地平线’的花芽分化过程可以划分为8个时期, 持续时间大约为9周; (2) ‘地平线’花芽分化时期与各生长指标(株高、株幅、真叶数和播种周数)均极显著相关, 通过回归方程判断其幼龄期在5片真叶前结束; (3) ‘地平线’为量性短日照植物, 促其早花的最佳光周期为昼12 h/夜12 h; (4) 较长日照下‘地平线’的株形高大松散, 较短光周期下矮小紧凑。‘地平线’天竺葵在5片真叶前, 采用16 h日照栽培, 可得到健壮幼苗; 5叶期后, 12 h日照诱导, 可促进分枝开花。

关键词: 天竺葵 花芽分化 营养生长 光周期 开花调节

Abstract: To study the characteristics of floral bud differentiation (FBD) and effects of photoperiod on growth and development of *Pelargonium hortorum* ‘Horizon’, paraffin section method was used in identify the process of FBD, and flowering time and flower quality were investigated as the effects of 7 kinds of photoperiod. The results show that: (1) There were 8 phases during FBD of ‘Horizon’, and it lasted about 9 weeks. (2) Significant correlation existed between vegetative growth and FBD phases, and juvenile phase of ‘Horizon’ ended at 5-leaf stage according to the regression equations. (3) ‘Horizon’ was a facultative short day plant, of which the best photoperiod promoting flowering was 12 h. (4) The plants tended to have a tall and loose habit under longer days, and an opposite habit under shorter days. It is suggested that *Pelargonium hortorum* ‘Horizon’ planted under long-day of 16 h before 5-leaf stage to be strong as seedlings, and then under short-day of 12 h to promote branches and flowers.

Keywords: *Pelargonium hortorum*, floral bud differentiation, vegetative growth, photoperiod, flower control

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