

‘藤稔’葡萄冬季休眠后期花芽发育相关基因表达的分析

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Analysis of Expression Levels of Floral Genes During the Late Dormancy Stage of Grapevine ‘Fujiminori’

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摘要 以6年生‘藤稔’葡萄(Vitis vinifera L. ‘Fujiminori’)为试材,在枝条不同节位进行短截处理,对9个花发育相关基因的时空表达进行研究。结果表明,在冬季休眠后期虽然VvAP1、VvAP2、VvAP3、VvAG、VvFUL、VvSOC1、VvLFY和VvFLC基因的相对表达水平较低,但冬芽仍可进行花芽分化;短截处理可以促进花发育,增加各节位芽中基因的相对表达量;同一枝蔓上的中部芽比上部芽和下部芽发育好,基因相对表达量高,花芽生长发育时间长。

关键词: 葡萄 花芽 节位 基因表达

Abstract: The differentiation process of winter buds at different nodes of grapevine branch during late dormancy stage was investigated in this study, for which some branches of 6-year-old grapevine (Vitis vinifera L. ‘Fujiminori’) were cut back and only the two upmost buds were kept and used as material for expression analysis of nine floral genes. The result showed that the levels of 8 genes, such as VvAP1, VvAP2, VvAP3, VvAG, VvFUL, VvSOC1, VvLFY and VvFLC were low in winter. However, the buds could keep flower-bud-differentiation state; the branch-cut-back treatment could not only promote the floral development, but also increase the gene expression levels in the buds at different nodes; The quality of the central buds on a branch and the relative gene expression levels in them were all higher than those buds at upper and lower nodes of the same branches. Other, the central buds seemed to have a longer development period.

Keywords: grapevine, floral, nodes, gene expression

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