

硼对砀山酥梨营养生长和果实品质的影响

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Effects of boron on the growth and fruit quality of Dangshansu pear

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摘要

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摘要 为改善砀山酥梨树体营养状况, 提高果实品质, 在其新梢生长期(3~7月份), 叶面喷施不同浓度水平(0.2%, 0.3%, 0.4%)的硼肥(硼砂), 研究不同处理对砀山酥梨叶片硼含量及其变化动态、砀山酥梨营养生长和果实品质的影响。结果表明: 砀山酥梨叶片硼含量随新梢生长而上升, 在新梢停长期含量最高, 之后开始下降, 呈现低—高一低的变化趋势; 叶面喷施不同浓度水平的硼肥后, 在0.2%~0.3%范围内, 叶片含硼量随喷施浓度的提高而增加; 适量施硼促进了砀山酥梨的新梢生长, 显著增加了单叶面积、百叶重、叶片叶绿素含量; 提高了砀山酥梨果实的可溶性糖、可溶性固形物含量和果肉硬度, 降低了果实含酸量。综合果树生长状况、果实品质和生产成本等因素, 砀山酥梨树体缺硼时, 在新梢生长期3~7月份, 叶面喷施2~3次0.3%的硼肥效果最好。

关键词: 砀山酥梨 硼 营养生长 果实品质

Abstract: In order to increase the nutrition levels and fruit quality of pear, Dangshansu pear (*Pyrus bretschneideri* cv. Dangshansu pear) was selected to be the experimental material in this research. The effects of different boron levels on the dynamic change of the boron contents of leaves, the vegetative growth and fruit quality of Dangshan pear were studied by spraying boron to the foliage four times in different levels (0.2%, 0.3% and 0.4%) at Dangshan pear shoot growth stage (May to July). The results show that the boron contents are increased with shoot growth, reach to its highest level at stage of shoot cease growth, and then start to decline. After foliage spraying with different levels of boron, the boron contents of leaves are increased in the treatments of 0.2% to 0.3%. Appropriate boron application would promote the shoot growth, enlarge the single-leaf area, the weight per 100 leaves and the content of chlorophyll, and increase the soluble sugar, the soluble solids content and pulp hardness, while the fruit acidity is decreased significantly. As the tree is deficient in boron, the foliage fertilization by spraying 0.3% boron two or three times at shoot growth stage (April to July) is the best treatment referring to the tree vigour, fruit quality and production costs.

Keywords: Dangshansu pear Boron growth fruit quality

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