

عنوان مقاله:

(Pruning and girdling influence alternative bearing of 'Kinnow' mandarin (Citrus reticulata Blanco)

محل انتشار:

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خلاصه مقاله:

Purpose: This study was undertaken to investigate the effects of pruning and girdling on yield, fruit size and quality of 'Kinnow' mandarin (Citrus reticulata Blanco) trees during two seasons. **Research method:** The treatments included: control (unpruned and ungirdled trees), light pruning (removal 10% of 15-20 cm branches), intense pruning (removal 20% of 15-20 cm branches), girdling (removal 5 mm trunk bark), light pruning + girdling, and intense pruning + girdling. The treatments were applied in on-years (2016 and 2018) and traits were measured in following season. **Findings:** Light pruning increased yield and fruit number by 170.4% and 191.5%, respectively, while fruit weight and volume slightly decreased by 7.2% and 12.4%, respectively, compared to control. Fruit dimensions and, TSS and TA of fruit juice were not affected by treatments. However, TSS/TA ratio was significantly declined in both pruning treatments. In addition, vitamin C content of fruits decreased in pruned trees and light pruned + girdled trees compare to control. The yield was positively correlated with fruit number and negatively with fruit weight, fruit volume and vitamin C content. **Limitations:** Despite these findings, more research is needed to identify mechanisms of pruning and girdling on alternative bearing in citrus. **Originality/Value:** These results suggested that pruning alone or plus girdling of 'Kinnow' mandarin trees reduce competition for nutrients and induce accumulation of carbohydrates in branches, which enhanced yield of the next season.

کلمات کلیدی:

Biennial bearing, citrus, fruit quality, Yield

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