

The Time of Pruning Influences Duration of Cropping Cycle and Fruit Quality in Guava

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Abstract

The goal of this study was to document the best time of pruning for 3-year-old field-grown guava cultivar 'Diwang Ba' (*Psidium guajava* L.) planted in Kaohsiung, Southern Taiwan. Trees were pruned every two months from February to November in 2008. The impacts of pruning on the duration required for cropping cycle included sprouting, anthesis, fruit setting, and fruit growth period were investigated. The flowering rate and floral morphology of new shoots produced after pruning was calculated. The mature fruit characteristics included the fruit weight, the total soluble solids content (TSSC), the titratable acidity concentration (TAC), flesh thickness, firmness and ascorbic acid content were determined. Results indicated that approximately 200 days are required to complete the duration of a cropping cycle when pruning was conducted from August to December, whereas it decreased to 160 days when pruning was conducted from February to June. The flowering rate of new shoots reached 90% when trees were pruned in October and December, while it decreased to 60% when the trees were pruned in February, April and June. Out of all of the treatments, the fruit harvested from trees pruned in August possessed the best quality (12.9 % of TSSC, 13.81 Kg/cm² of firmness and 211.3 mg/L of ascorbic acid), whereas the poorest quality of fruit were obtained when trees were pruned in December (9.5 % of TSS, 11.76 Kg/cm² of firmness and 128.3 mg/L of ascorbic acid). It was suggested that 'Diwang Ba' guava trees grown in southern Taiwan that are pruned in August have a better quality but also have a longer growing period and lower flowering rate.

Key words: guava, pruning, cropping cycle, flowering, fruit, quality

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