



Timing of bunch pruning management enhances bunch and fruit qualities of 'PITA 24' plantain (*Musa AAB*) hybrid

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ABSTRACT

Objective: Reports on the effects of sink-source modifications on banana fruit growth differ between studies; and may be related to differences in fruit age at the time of bunch pruning. Timing is a highly crucial factor in routine horticultural practices as inappropriate timing may not be effective. This study investigated the post-anthesis period at which bunch pruning would be most effective in enhancing post harvest qualities of plantains.

Methodology and results: Bunch pruning (i.e., removal of two distal hands and the male bud) was applied at full anthesis (at opening of last female hand) and at weekly intervals of 1, 2, 3 or 4 weeks thereafter. These were compared to a non-prune control in a randomized complete block design trial. Data were collected at harvest on bunch weight, hand and fruit count, bulking duration, bunch-fill index (BFI) and number of properly-



filled fruits (PFF) per bunch. Other data were harvest index (HI), fruit weight, length and girth, pulp dry matter content and fruit edible proportion. Bunch and fruit quality traits generally improved with bunch pruning up till 3 weeks after the full anthesis, but best fruit traits were obtained when pruning was applied immediately after the opening of the last female hand. There was a drop in BFI, PFF, HI, fruit yield and individual fruit size when bunch pruning was delayed for 4 weeks after full bunch anthesis.

Conclusion and application of findings: Our results confirmed that bunch and fruit qualities of plantains could be improved through a judicious and timely application of bunch pruning. Bunch pruning management should not be delayed beyond 3 weeks after the opening of the last female hand for optimum result.

Key words: Bunch pruning, timing, bunch and fruit traits, plantain.