

# EFFECT OF VARIOUS DEGREE OF CANOPY PRUNING ON PLANT GROWTH, YIELD, AND CONTROL OF CANKER DISEASE OF DRAGONFRUIT CROP

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Dragonfruit (*Hylocerus undatus*) is one of the most important tropical crops in the southern part of Vietnam. 'Mop Top' (concrete post) is a traditional production system which is associated to many inherent issues to the industry such as old unproductive cladodes and support instability, management constraints, providing a haven for pests and diseases, poor quality fruit, etc. The Mop Top plant structure itself presents challenges for orchard hygiene and poor management leads to significant pest and disease problems, particularly canker disease caused by *Neoscytalidium dimidiatum*. This newly emerging disease can quickly spread during the wet season and heavy infection can reduce plant growth, marketable production, and induce a high dependency on fungicides which could lead to food safety issues due to intensive and inappropriate chemical applications. This investigation showed that high degrees of canopy pruning on Mop Top systems ranging from 40% to 60% could support new vegetative shoots (1.6–16.1 shoots/plant) and reduce disease incidence (%) and disease severity (%) on cladodes as compared to control (un-pruned). Moreover, treatments of pruning significantly increased numerous flower formations from 15.4% to 20.1% while stimulating the number of effective cladodes (bub formation) on the first layer, second layer, and third layer. This method also reduced disease severity on fruits up to 26.2%–32.2% as compared to un-pruned treatments. There were no evidences on fruit weight and yield affected by pruned treatments.

**Keywords:** dragonfruit, pruning, canker disease, *Neoscytalidium dimidiatum*