ISSN 0511-5728
The West Indian Journal of Engineering
Vol.9 No.1, January 1984, pp. 13-16

An Appropriate Technology Approach to Mechanisation of Coconut Harvesting

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Abstract: *The coconut palm thrives in the moister regions of the tropics - along the banks of back-waters, lagoons and estuaries, and close to the water's edge on sandy sea beaches. The palm yields many products of use to the human race such as oil, fibre, sugar and alcohol. The nuts will be of a better quality if harvested long before they appear dead ripe and start to drop of themselves from the tree. In this paper, an inexpensive mechanical drive system for climbing tall monocot trees such as the coconut palm is proposed. The main features of the proposed system are: 1) a novel self-gripping tree-climber mechanism designed to carry the operator with it, 2) a counter-weight assembly centrally located in the coconut field, and 3) a cable linking the counter-weight to the climber mechanism. The operator exercises control over the speed of climbing by supplementing the pull of the counter-weight whenever the speed is too low, and by applying a partial brake whenever the speed is too high.*

Keywords: *Mechanisation, drive system, self-gripping tree-climber, coconut harvesting*