

Energy Expenditure and Exertion For Opening a Tender Coconut

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ABSTRACT

The present study was undertaken to gain knowledge of the energy spent and the physical exertion experienced during opening a tender coconut in traditional process and by using punch cum splitting machine and tender coconut opener. Tender coconut vendors aged between age 28 and 45years having a minimum experience of 5 years in tender coconut vending formed the sample. The mean energy spent in opening a tender coconut by coconut punch and splitting machine, tender coconut opener and traditional method were 8.03kj/min, 7.20 kj/min and 6.78 kj/min respectively. Traditional process of opening a tender coconut by using a hand sickle was found less energy consuming. Vendors were relatively comfortable with the conventional method. There was a high significant mean difference ($P = <.0001$) in the physical exertion of the vendors when opening a tender coconut using punch cum splitting machine, tender coconut opener and traditional process. Out of the three methods vendors perceived comparatively less exertion when opening a coconut in traditional process. The tender coconut opener and punch cum splitting machine were equally causing body discomfort while operation. With reference to energy expenditure and physical exertion the conventional way of opening the coconut was found better than the other two. Though the traditional process scored superior to the tools used in the study, the vendors expressed that skill is required to punch the tender coconut and the chances of cutting the fingers is very high in this process. For that reason there is a need to redesign the tender coconut opening tools for the safety of vendors.

Keywords: *Coconut, Energy, Exertion and Expenditure.*