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A Comparative Study on the Manual Beating of Paddy and Manually Operated Paddy Thresher on Farm Women

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ABSTRACT An ergonomic study was taken up to compare paddy threshing activity undertaken by farm women using two methods wiz manual beating of paddy on wooden platform and by using manually operated paddy thresher. The mean ▲HR work for manual beating of paddy was found to be 154.5 beats/min, whereas it was 122.5 beats/min with the use of manually operated paddy thresher. A significant reduction in heart rate of 20.71 percent was observed by improved method. The energy expenditure rate (EER) found to be 17.64 kj/min for manual beating whereas with the use of paddy thresher, the EER recorded was 12.80 kj/min. The total cardiac cost of work (TCCW) and physiological cost of work (PCW) reduced by 60.28 percent with the use of paddy thresher. Higher application force with double operators increased the total output capacity of the thresher per hour per person. Suggestions in the design of threshing drum can be incorporated to make it more acceptable in the field.