



A Case Study

## An ergonomic study on evaluation of single wheel hoe in reducing drudgery

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**SUMMARY :** Women constitute a major task force in agricultural operations in India. Therefore, it becomes necessary to study the ergonomics of women operators involved in weeding and to suggest modifications for further reduction of human drudgery. Heart rate is one of the accurate means to evaluate the functional demands of work on the worker. Hence, the study was done to know the performance of improved weeder that is single wheel hoe in reducing drudgery among women engaged in weeding activity. The results showed that the total cardiac cost of work was 285.0 beats, the physiological cost of work was 6.33 beats/min, the average working heart rate during weeding was 112.5 beats/min and the average energy expenditure was 9.16 KJ/min during the weeding activity performed by improved tool, the single wheel hoe. Weeding activity was performed for maximum number of days in a year from morning till evening in squatting position majority of women perceived it as moderately heavy activity.

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