

Development and ergonomic evaluation of pedal operated cashew nut desheller

■ V.B. KADAM, V.V. AWARE, N.A. SHIRSAT AND P.U. SHAHARE

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See end of the Paper for authors' affiliation

Correspondence to :

V.B. KADAM

Department of Farm Power and Machinery, College of Agricultural Engineering and Technology, Dapoli, RATNAGIRI (M.S.) INDIA
Email : vbk14987@gmail.com

■ **ABSTRACT** : India is the largest producer, processor, exporter, importer and second largest consumer of the cashew in the world. The manual shelling process is done with pedal operated cashew nut sheller in standing posture. The objective of this study was to develop the pedal operated cashew nut desheller in such way that it could operated in sitting postures to reduced the drudgery involved in the deshelling operation. The dimensions in the design of seat were used from available anthropometrics and strength data of women worker of Konkan region. The modified pedal operated cashew nut desheller was ergonomically evaluated on six women ranging from 20 to 45 years. The mean values of working heart rate, corresponding oxygen consumption, energy expenditure, per cent VO_2 , ΔHR were 93.56 bpm, 0.39 l/min, 8.31kJ/min, 29.33 per cent, 10.54 bpm which were less than limit of continuous performance (LCP). The operation categorized into 'moderately heavy'. With the help of developed pedal operated cashew nut desheller, kernel recovery of cashew nut obtained 7.68 kg/day. The overall performance of the developed pedal operated cashew nut desheller was good.

■ **KEY WORDS** : Cashew nut, Pedal operated desheller, Ergonomics, Anthropometric data

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