Anthropometric data of agricultural workers for suggesting dimensions of manually operated weeder

D.T. KHOGARE AND SUNITA BORKAR

ABSTRACT

In the vidarbh region of Maharashtra state, most of the agricultural operations are performed manually with the help of traditional tools (Khurpi). Use of improved tools and machinery is very low due to inherited constraints like difficult terrain, wide variation in slopes and altitude’s, land tenure systems and cultivation practices. At present traditional hand tools and equipments being used in the Vidharb region are manufactured by the local artisans and small scale manufacturers without application of ergonomic considerations. Thus, a study was undertaken to suggest a dimensions of manually operated weeder on anthropometric data of the agricultural workers of Maharashtra State. Present investigation was undertaken in Vidharb Region of Maharashtra State during 2010-2011. Total 2500 subjects were selected randomly from five districts of Vidharb region of Maharashtra State, from each district 500 subjects were selected randomly. Altogether, 19 body parameters useful for manually operated weeder design were selected for the study. Data had been analyzed for mean, standard deviation, 5th percentile value, and 95th percentile values to be used in weeder design. Different body dimension to stature ratio was also calculated and compared with other studies. Anthropometric data of agricultural workers of Maharashtra was significantly different than the other regions of the country. Present anthropometric data of agricultural workers could be useful in design and development of manually operated weeder.

Key words: Anthropometric data, Agricultural workers and Weeder