



Adoption level of developed manually operated weeder

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ABSTRACT

In India most of the weeding operation is done by *Khurpi*. Due to traditional method of weeding most of the agricultural workers suffer from postural discomfort which decreases the productivity and efficiency of workers. Weeding by manually operated weeder increases the productivity and efficiency of workers. Hence, the present investigation was undertaken with an objective to study the adoption level of developed manually operated weeder by agricultural women. The study was conducted in Nagpur, Amravati, Buldhana, Yawatmal, and Vashim districts of Vidarbha region in Maharashtra state during the year 2010-2011. For the present investigation 5 agriculture labours were selected randomly from 100 land holders of five districts, consisting of total agriculture labours 2500 in which 1500 were female labours and 1000 male were labours. Pre-structured questionnaire was used for data collection. Ergonomical and field performance evaluation of manually operated weeder was done on farmers field. After the evaluation of manually operated weeder farmers were given preferences in questionnaire.

INTRODUCTION

Weeding is one of the most important farm operations in crop production system. Weed growth is a major problem for dry land crops particularly in oilseed crops like groundnut and mustard causing a considerable lower yield. As oilseeds constitute the second major agricultural crops in India next to food grains in terms of quantity and cost, it is necessary to mechanize different farm operations of this crop. India is the third largest producers of groundnut in the world and accounts for about one-fifth of world's production. In India this operation is mostly performed manually with *Khurpi* or trench hoe that requires higher labour input and also very tedious and time-consuming process. Moreover, the labour requirement for weeding depends on weed flora, weed intensity, time of weeding and soil moisture at the time of weeding and efficiency of worker. Often several weeding are necessary to keep the crop weed free. Reduction in yield due to weed alone is estimated to be 16-42 per cent depending on crop and location and involves 1/3 rd of the cost of cultivation (Rangasamy *et al.*, 1993). Weeding and hoeing are generally done 15-20 days after sowing. The weed should be controlled and eliminated at

their early stage. Depending upon the weed density, 20-30 per cent loss in grain yield is quite usual which might increase up to 80 per cent if adequate crop management practice is not observed. Rice and groundnut are very sensitive to weed competition in the early stage of growth and failure to control weeds in the first three weeks after seeding reduce the yield by 50 per cent (Gunasena and Arceo, 1981). Hence, the present investigation was undertaken with an objective to study the adoption level of developed manually operated weeder by agricultural women.

METHODS

The present study was conducted in Nagpur, Amravati, Buldhana, Yawatmal, and Vashim districts of Vidarbha region in Maharashtra state during the year 2010-2011. For the present investigation, 5 agriculture labours were selected randomly from 100 land holders of five districts, total agriculture labours were 2500 consisting of 1500 female labours and 1000 male labours. Pre-structured questionnaire was used for data collection. Ergonomical and field performance evaluation of manually operated weeder was done on farmers field. After the