



Gender Friendly Technology for Intercultural Operation Used in Indian Agriculture

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The traditional tools used by women worker involves operating in bending or squatting posture which causes drudgery and leads to serious health issue such as back pain, knee pain and sometime also causes injury while operating it. Therefore, women friendly some farm-tools and implements have been designed and developed by research organisations and state agriculture universities which are briefly described in this article.

Introduction

Agriculture has important place in Indian economy and main work force in it is human power. The women work force in agriculture and allied sectors is estimated to be around 91 million which amounts to about 37 % of the total rural workers in the country. The tools/equipment available for different farming operation are earlier designed for men workers keeping in mind male dominance in Indian agriculture environment and same was given to women despite of their suitability to work. However, women face different technological difficulties in operating these tools, thereby causing serious occupational health problems and ultimately reducing work efficiency. Most of the activity where women are involved includes sowing, transplanting, weeding/interculture, harvesting, threshing, and winnowing which are very drudgery prone. The traditional tools used by women worker involves operating in bending or squatting posture which causes drudgery and leads to serious health issue such as back pain, knee pain and sometime also causes injury to women operating it.

Therefore, there is need to develop tools/ equipment considering women suitability to work. A number of farm-tools and implements have been designed and developed by research organisations and state agriculture universities for weeding and intercultural, some of which are listed below with brief description.

1. Grubber Weeder: It is used for weeding and intercultural operations in row crops like soybean, pigeonpea, rapeseed, chickpea etc. It is a simple and light weight, manually operated equipment for weeding and intercultural in upland row crops. It consists of long handle, ferrule, three tynes and sweep type blades. The operator uses pull force to break the soil crust and uproot the weeds. The output of the equipment is 70 m²/h.



2. Twin Wheel Hoe: It is used for weeding and intercultural in upland row crops in black soil region. It consists of two wheels, frame, V-blade fixed on a tyne, U-clamp and a handle. The cutting and uprooting of weeds in field is done through push and pull type action of the equipment. The equipment is operated at optimum soil moisture condition and preferably after 20-25 days of sowing i.e. when the weeds are about 1 to 3 cm height for better weeding performance. The capacity of this machine is about 150 m²/ hr.



3. Cono-weeder: It is used for uprooting and burying of weeds in between standing rows of rice crop in wetlands. The two truncated rollers one behind other are fitted at the bottom of a long handle. The conical rollers have serrated blades on the periphery. A float provided in front portion prevents the unit from sinking into the soil. It disturbs the top soil and increases aeration also. The equipment is operated in standing posture thus avoiding bending involved during uprooting of weeds by hands in traditional practice. The capacity of this machine is about 120 m²/ hr.



Conclusion

These are some tools and equipment mostly used by women worker in India agriculture for weeding and interculture. Some of these tools are refined and modified as per the need of the women operator. By using these tools drudgery can be reduced by avoiding bending and squatting postures during weeding and interculture. Thus, issues of drudgery and health problems can be addressed by using these tools and also there would be improvement in their livelihood.