



Harvesting Tools and Equipments Used by Farm Women

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A number of farm-tools and implements which are women friendly have been designed and developed by research organisations and state agriculture universities for harvesting of crops, some of which are listed in this article with brief description.

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 dominancy 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 were women are involved includes sowing, transplanting, weeding, 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 harvesting, some of which are listed below with brief description.

1. Improved Sickle: It is used for harvesting of wheat, rice, soybean, chickpea, grasses and thin stalked crops. It consists of serrated blade, ferrule and wooden handle. The cutting of crop stalk is being done with the improved (serrated) sickle by sawing action as against by impact or pulling action in case of local (plain) sickle. The capacity of this machine is about 150 m²/hr.



2. Sugarcane Stripper: It is used for stripping of leaves and detopping of cane after harvest of sugarcane. The stripper works by separating and pushing the leaf sheaths away from stalk. A knife is welded on the stem of the stripper for detopping of canes and for cleaning roots. The capacity of this machine is about 46 kg/hr.



3. Bhindi Plucker: It is used to protect worker from thorny/chemical materials during bhindi harvesting. It is a tool which helps on plucking of Bhindi (Lady's finger) without causing any itching or discomfort to skin. It fits into the hand properly, with the help of two rings - one in thumb and another in little finger. Force to cut the pedicel is exerted by pressing these two fingers together.



4. Tea Plucker Scissor-type: It is used for plucking tea leaves. While plucking tea leaves skin of fingers and hands get injuries due to chemicals. In scissor type tea plucker hand/finger contact is avoided thereby eliminating skin problem. The capacity of this plucker is 8.6 kg/h.



5. Fruit Harvester: It is used for plucking of fruits from orchard trees. It consists of main body of PVC having cylindrical shape. The upper end of the body is closed and fixed with two fingers cut in V-shape and with sharp blades. An opening is provided on the body for entry of the fruits to be harvested. The length of the cutting blade was increased from 30 mm to 70 mm to increase the comfort of the worker. The capacity of this machine is about 420 fruits /hr.



6. Senna leaves stripper: It is used for Stripper for stripping of senna leaves. It consists of an openable metallic tube with a circular cutter mechanism at center. The device is easy to operate and protects hands of operator from Senna thorns.



7. Cotton Picker (Battery operated): It is a hand operated cotton picking machine and is operated by a light weight 12 V battery. Output capacity of cotton picker varied from 17.0-22.6 kg/day.



Conclusion

These are some tools and equipment mostly used by women worker in India agriculture for harvesting of crops. 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 harvesting. Thus, issues of drudgery and health problems can be addressed by using these tools and also there would be improvement in their livelihood.