



Case study: A suitable low-cost tool (KWG gloves) for okra harvesting for farm workers

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Abstract

A Group farm woman from the Nayapurwa village in the block Kalakankar of District Pratapgarh, (UP), participated in a study on the use of KWG gloves in okra picking and their potential to prevent occupational injuries. According to first-hand information gathered by surveying okra pluckers, okra harvestings were discovered to have thorn and kellick piercings, cuts on hands, and severe finger wounds. In order to overcome these challenges, the current study was conducted to evaluate the suitability, comfort, cost-effectiveness, and reduction of stress, cuts, rash, and allergies as well as the work efficiency of farm workers. It was discovered that the KWG gloves had a good adaptability rate, which decreased drudgery and sped up the activity due to their comfortable grip. Due to the convenience provided by the KWG gloves okra harvested per day per person increased to 128.24 kg/ day from 110.08 kg/day when harvested without gloves.

Keywords: KWG gloves, occupational injuries and okra harvesting.

Introduction

Since agriculture is one of the most common occupations in India, it employs the greatest number of people; around 58.4% of the population works in agriculture. Punam Rani *et al.* (2013). Weeding, grading, threshing, winnowing, cleaning, harvesting, and other agricultural tasks are performed by around 75% of rural women in India. (Vinay Deepa and Singh Divya, 2013) . As a result of the thorny bhendi habit, most farm women harvest okra with their bare hands, however others choose to use rubber gloves. The main issues that okra pluckers face are deep cuts on their hands, painful and serious wounds on their fingers, and these issues make it

difficult for farm women to do household chores. Wearing hands-knit gloves helps to solve this issue by protecting the palms and hands from harm that might occur when picking okra and making the labor comfortable and absorbent (Padma and Khateeja Sulthana, 2017) . Knitted gloves with protective features need to be compared to bare hands or standard procedures to anticipate potential workplace dangers. According to the literature currently available, there is little information on how to prevent injury to the hands and fingers during okra picking.

Materials and Methods

This study begins with Kiran Maurya, Village Ainthu, Kalakankar Pratapgarh (Uttar Pradesh) use first trial of KWG gloves because she indulges with okra production but while harvesting, she faced too much difficulties because okra fruits have an almost hair like bristles and prickly surface exposure to which is uncomfortable to the hands of the harvester. In extreme cases, person with sensitive skin have developed sores or allergic reactions after a prolonged period of exposure to the pods during a harvest. Therefore, to minimize above mentioned problems KVK **Pratapgarh developed a suitable low-cost tool (KWG gloves) for okra** harvesting which is made by Krishi Vigyan Kendra in collaboration with (KWG) KALAKANKAR WOMENS INTEREST GROUP.



Plan, Implement and Support:

Harvesting of okra is laborious process the hair on the fruit causes irritation to the fingers and now a days, labour availability is one issue. To reduce the drudgery in harvesting okra, KVK pratapgarh evaluated the efficiency of KWG gloves. Using of KWG gloves increased the work output and reduced operating cost per quintal (rs.20/g) of okra harvested. Due to the convenience provided by the KWG gloves okra



Cuts while harvesting okra

harvested per day per person increased to 128.24 kg/ day from 110.08 kg/day when harvested without gloves.

Output: MRS. KIRAN DEVI has used KWG gloves in .05 ha land. WITHOUT using gloves harvesting capacity of okra was 1.25 q (40 %) along with injuries. And after as per suggestion of KVK this drudgery reduction technology used and harvesting capacity increased 1.57 q. (50.24%) without any injuries. Kiran devi is selling 75 kg okra / day @ 40 rs.



Suitable low-cost tool (KWG gloves) for okra

Treatments	Work output kg / hr	work output kg / worker/day	Operating cost Rs/q	% Saving in operating cost
Harvesting without gloves	13.76	110	139	—
Harvesting with KWG gloves	16.03	128	119	16.82

OUTCOME: okra crop is one of the major crops in summer and rainy season. KVK pratapgarh conducted 100 demonstrations in on KWG GLOVES in nearby villages of the district and This tool has been disseminated in more 25 villages of the district in area of approximately 50 ha. farmers are demanding this gloves for picking okra because of increase efficiency and protection to the skin, saves from the cuts, wounds, and injuries, and cost effective too. The outcome of this trial is that harvesting capacity of the okra per hour is increased than other methods of harvesting.

IMPACT: The technology adopted by Kiran has played a vital role to disseminate in near by villages and now she has been able to savers. 4500/ha in okra harvesting operation apart from cuts, wounds, and skin injuries. Considering the result of the technology, the area of adoption has

Increased in 25 villages covering the 50 ha in okra production, resulting in to saving of Rs. 2,25,000 only in harvesting operation in adopted area. She motivated the farming communities not for only adoption a part from that she made a vegetables growers female group too for the selling of vegetables in the markets together and this group is stitching KWG gloves and selling in Rs.50 to other farmers. Kiran is the one who adopted and now selling to the gloves to the others farmers. She has set one example in her village. She is one of the progressive farmers after a becoming a part of KVK activities and get their effectiveness for her own development.



Conclusion

As per the results of the study on okra gloves usage in okra harvesting and their role in combating occupational injuries farm workers, it was observed that they prefer okra gloves and it was also observed that they need protection to hands while harvesting /picking activities. Created awareness to farm worker and used these gloves for field trials. The willingness adaptability rate of the gloves was good; hence, it can be concluded that, the farmers have gained knowledge about gloves. Using gloves while harvesting okra gives proper protection to the hands especially from cuts, bruises rashes, boils etc., and reduced the drudgery in the hands observed farmers /farm women /okra pluckers practice and speeding up the activity due to comfort grip, workers expressed happiness attending the house hold activities.



References

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