

Perception of farm women about efficiency of drudgery-reducing farm implements

M SHIVAMURTHY, SHILPA RANI* and YH PRABHUSWAMY**

Department of Agricultural Extension

***Distance Education Unit, Directorate of Extension**

****Department of Biotechnology, University of Agricultural Sciences**

Bangalore 560065 Karnataka, India

Email for correspondence: murudaiah.shivamurthy@gmail.com

© *Society for Advancement of Human and Nature* 2017

Received: 14.7.2016/Accepted: 22.9.2016

ABSTRACT

The present research was carried out in Kolar and Tumkur districts of Karnataka in three villages namely Nagasandra, Ikkanur and Huyludore involving 120 women respondents. Three improved agricultural implements like Naveen sickle, groundnut decorticator and manual weeder were selected for the study. Ten statements were retained concerning to each of the three implements subjected for research to assess perception of farm women about efficiency of improved agricultural implements. All the respondents reported that using hand operated weeder had reduced their drudgery as it avoided sitting on legs for long hours; ninety five per cent of the respondents expressed that there was no need of sitting and squatting thereby they could avoid backache. All the respondents expressed that the curvature of the Naveen sickle was helpful in avoiding regular striking of the fingers to the hard surface of the field. The serrated sharp ends made it possible to cut the stems of the weed plants easily with less energy and which didn't require special training to operate. All the farm women expressed that the use of groundnut decorticator reduced drudgery and avoided straining of fingers due to continuous pressing and removal of nuts from the pod.

Keywords: Naveen sickle; groundnut decorticator; manual weeder; farm women; drudgery

INTRODUCTION

Rural women form the most productive work force in the economy of majority of the developing nations including India. Agriculture, the single largest production endeavor contributing to 14.5 per cent of GDP is increasingly becoming a female activity due to migration of men to urban areas for employment (Begam 2000). Women in agriculture are generally not able to have access to extension services and production assets like seed, water, credit, subsidy etc. As most of them are not recognized as farmers for want of ownership of land they are not considered as beneficiaries of various government programmes/services (Rao 2010, Neetha 2010).

Besides some of the agricultural tasks performed by them are not valued adequately and considered less important economically due to multiple

roles they perform within the family and the farm. Her access to knowledge and information is constrained and therefore her opportunities get limited. Traditionally women perform exclusively tedious, time and labour-intensive works like sowing, transplanting, weeding, intercultural operations, harvesting, threshing, transportation and postharvest operations like shelling, cleaning, grading and processing etc. All these jobs involve considerable amount of drudgery as they are not only done manually but also they have to be performed by bending posture under the shining sun for long hours (Kumar Bharath et al 2011). This calls for improvement of the present status of rural women in agriculture and to enhance the opportunities for their empowerment.

Women-friendly improved implements and tools need to be developed, refined and evaluated based on feedback of the farm women. Number of machines

developed so far to increase efficiency and reduce drudgery at lower cost are popular only among male farmers (Singh and Gite 2007).

Scientific and technological inputs and interventions are thus required in agriculture to relieve farm women from the physical and mental strain (Singh et al 2008). Keeping these points in view this study was conceptualized to understand the perception of farm women on efficiency of drudgery-reducing farm implements.

METHODOLOGY

The present research was carried out in Kolar and Tumkur districts of Karnataka. The demonstrations on the use of improved agricultural implements like Naveen sickle, groundnut decorticator and manual weeder were conducted involving farm women by the University of Agricultural Sciences, Bangalore and these three agricultural implements were selected for the study. Three villages namely Nagasandra, Ikkanur and Huyludore were selected purposively where the demonstration on drudgery reducing farm implements was conducted.

Initially an exhaustive list of all the farm women was prepared by consulting the village accountant of the revenue department. Forty farm women using each of these three improved implements were selected by applying systematic random sample technique. Thus in total 120 respondents were selected for the study.

A comprehensive list of items/statements consisting of advantages and disadvantages of using/handling of identified improved agricultural implements was prepared separately through review of literature and discussions with the researchers of the department of agronomy and agricultural engineering. These statements were subjected to a test of relevancy by taking ratings from the judges.

Thus 10 statements were retained concerning to each of the three implements subjected for research to assess perception of farm women about efficiency of improved agricultural implements. The data were collected by personal interview method by using a structured schedule developed for the study. Drudgery was operationalized as physical and mental strain, fatigue, and monotony and hardship experienced by farm women while doing agricultural operations.

RESULTS and DISCUSSION

Perception of farm women towards improved groundnut weeder

Groundnut weeder is the hand-operated light weight non-corrosive labor saving implement designed by the university engineers for removal of weeds in the groundnut fields.

The data presented in Table 1 depict perception of farm women towards hand-operated weeder with special reference to drudgery. All the respondents reported that using hand operated weeder had reduced their drudgery as it avoided sitting on legs for long hours. Ninety five per cent of the respondents expressed that there was no need of sitting and squatting thereby they could avoid backache. Ninety per cent of the respondents opined that there was no direct contact between weeds and hands which avoided allergic affects. More than 87 per cent of them observed easier walking/movement which facilitated removal of more weeds in less time and more than 82 per cent of the farm women reported that it was easy to operate and women-friendly and there was no possibility of physical injury hence there was no need to have any training about the operation of the implement. Majority (70%) of the farm women opined that the implement reduced drudgery by avoiding strained movement of hands and 55 per cent of them observed that the cost of the implement was reasonable and it was easy to adopt and maintain.

Perception of farm women towards improved Naveen sickle

Naveen sickle is the light weight hand-operated, non-corrosive, saw-toothed and sharp instrument that requires less energy to cut and remove weeds from the fields.

Perception of farm women towards efficiency of Naveen sickle was assessed to understand whether it really benefited them by reducing drudgery or not. All the respondents expressed that the curvature of the sickle was helpful in avoiding regular striking of the fingers to the hard surface of the field (Table 2). The serrated sharp ends made it possible to cut the stems of the weed plants easily with less energy and which didn't require special training to operate. Besides majority of them expressed that the implement was reasonably cheap, convenient to use, didn't require maintenance and was women-friendly. More than

Table 1. Perception of farm women relating to efficiency of improved groundnut weeder (n= 40)

Statement	Yes		Partial		No	
	f	%	f	%	f	%
No need of sitting and squatting which avoids backache	38	95.0	2	5.0	0	0.0
No direct contact between weeds and hands which avoids allergic effects	36	90.0	2	5.0	2	5.0
No chance of physical injury during weeding	33	82.5	2	5.0	5	12.5
No strained movement of hands which helps in drudgery reduction	28	70.0	7	17.5	5	12.5
Avoids sitting on legs for long hours which helps in drudgery reduction	40	100.0	0	0.0	0	0.0
Walking facilitates easier movement thereby more weeds can be removed in less time	35	87.5	5	12.5	0	0.0
Special training is not required and hence anybody can operate the implement	33	82.5	1	2.5	6	15.0
The cost of the implement is reasonable	22	55.0	10	25.0	8	20.0

Table 2. Perception of farm women relating to efficiency of improved Naveen sickle (n= 40)

Statement	Yes		Partial		No	
	f	%	f	%	f	%
The curvature is helpful in avoiding hitting the fingers to the ground	40	100.0	0	0.0	0	0.0
Girth of the handle is in accordance with the palm to ensure proper grip	35	87.5	0	0.0	5	12.5
Serrated ends make it possible to cut the stem easily with less energy input	40	100.0	0	0.0	0	0.0
More straw can be recovered compared to the traditional sickle	22	55.0	8	20.0	10	25.0
Since blade is made up of self-sharpening steel, it lasts longer and there is no need of sharpening it frequently	37	92.5	3	7.5	0	0.0
Special training is not required and hence anybody can operate the implement	40	100.0	0	0.0	0	0.0
More area can be covered within less time	36	75.0	4	10.0	0	0.0
The cost of the implement is reasonable	40	100.0	0	0.0	0	0.0
Easy to adopt and maintain	40	100.0	0	0.0	0	0.0
The technology is women-friendly	40	100.0	0	0.0	0	0.0

Table 3. Perception of farm women relating to efficiency of improved groundnut decorticator (n= 40)

Statement	Yes		Partly		No	
	f	%	f	%	f	%
Avoids strained movements of hands and hence reduces drudgery	38	95.0	2	5.0	0	0.0
Avoids strained movements of fingers and hence reduces drudgery	40	100.0	0	0.0	0	0.0
Backache is avoided and hence reduces drudgery	25	62.5	2	5.0	13	32.5
Easy to operate the implement	39	97.5	1	2.5	0	0.0
Special training is not required and hence anybody can operate	40	100	0	0.0	0	0.0
More output with less time	40	100	0	0.0	0	0.0
The cost is reasonable	25	62.5	2	5.0	13	32.5
Easy for adoption and maintenance	32	95.0	0	0.0	2	5.0
The technology is women-friendly	40	100.0	0	0.0	0	0.0
Easy for adoption and maintenance	22	55.0	10	25.0	8	20.0

ninety per cent of the respondents observed that it lasted longer and there was no need to sharpen it frequently.

Perception of farm women towards groundnut decorticator

Groundnut decorticator is the instrument specially designed to remove nuts from the mature dried pods. Use of decorticator facilitates removal of more nuts in short time without damage. All the farm women expressed that the use of decorticator reduced drudgery and avoided straining of fingers due to continuous pressing and removal of nuts from the pod (Table 3). Besides they felt that it was easy to operate (97.5%), didn't require special training (100%), was women friendly (100%) and more pods could be decorticated in less time (100%).

CONCLUSION

The farm women perceived that all the three implements considered for the study were women-friendly, easy to operate, time saving and needed less energy to operate. Hence there was high degree of adoption of these implements by the farm women in the study area. Therefore there is need to popularize these implements in other areas. Government should

keep provision of subsidy on them and more and more demonstrations on their use may be conducted.

REFERENCES

- Begam M 2000. Women rights and rural employment. Kurukshetra, April 2000, pp 61-62.
- Kumar Bharath TP, Govinda Gowda V and Khandekar N 2011. Time utilization pattern and drudgery of horticultural crops. *International Journal of Engineering and Management Sciences* **2(2)**: 93-96.
- Neetha N 2010. Self-employment of women: preference or compulsion? *Social Change* **40(2)**: 139-156.
- Rao N 2010. Gender and productive resources: claiming women's entitlements to land. Paper presented, Expert Group Meeting on Gender and Productive Resources: Women's Entitlements to Land, Livestock and Energy, 17-18 August 2010, New Delhi, India.
- Singh P, Ruchi, Rahul and Singh J 2008. Perceived attributes of drudgery reducing implements in animal husbandry. *Indian Journal of Extension Education* **44(3-4)**: 86-92.
- Singh SP and Gite LP 2007. Ergonomical evaluation of hand-operated paddy winnower by women workers. *Journal of Agricultural Engineering* **44(4)**: 67-71.