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## Knowledge of rural women about grain storage

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### Abstract

The objective of the present study was to find out the knowledge of rural women about homestead technologies in Chittorgarh district. The study was conducted in *Bhadesar* and *Bassi* panchayat samities of Chittorgarh district of Rajasthan state. From each panchayat samiti, two villages where the homestead technologies have been promoted by the KVK since last five years were included in the study. The sample consisted of randomly selected 100 rural women, 25 from each village. Personal interview method was used for data collection. Mean per cent score were used for analysis of data. The knowledge of the respondents about Grain storage component revealed that majority of the respondents (51.16%) possessed average knowledge.

**Keywords:** Grain storage, rural women, homestead technology

### Introduction

A rural women hold on three fold responsibilities of home, farm and management of livestock. In home she devotes endless time in preparing food, washing clothes, procuring fuel from forest, bringing water, storing food grains, cleaning and maintaining house, looking after children and adults, participating in social and religious ceremonies and the list is never ending. Beside this, she does a lot of work in agriculture and animal husbandry. Adding to the plight of these, women use age old customary methods for performing all these tasks which make their work more drudgery ridden, tedious and thorny.

### Research Methodology

The study was conducted in Chittorgarh district of Rajasthan state. The district has 11 panchayat samities out of these, two panchayat samities namely *Bhadesar* and *Bassi* were selected purposively where the homestead technologies have been promoted by the KVK since last five years (2009-2013). Total four villages from two selected panchayat samities were included in the study. Sample for the study consisted of 100 rural women, 25 from each village. Personal interview method was used to collect the data from the respondents. Mean percent score were used for analysis of the data.

### Results and Discussion

#### Background information of the respondents

More than 40 per cent respondents belonged to the age group of 18-30 years and 38 per cent were from 31-45 years of age. Majority of the respondents (60%) were under upper caste category. Regarding education, 29 per cent respondents were illiterate and 24 per cent were educated up to middle level. Only 15 per cent respondents were graduates. Farming was the main family occupation of 89 per cent respondents. All the respondents were involved in some subsidiary occupations like farm labor, business and service. Majority (63%) belonged to nuclear family. More than 40 per cent respondents had small size family consisting of up to 4 members. Majority of the respondents (62%) were small and marginal farmers. Majority of the respondents (75%) were residing in *pucca* houses.

#### Knowledge of the respondents about Grain Storage

Knowledge of the respondents about grain storage. Critical examination of the knowledge score highlights that the respondents possessed average knowledge about grain storage component (51.16MPS).

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An in depth enquiry into knowledge of the respondents in different components was made to find out specific deficiencies in knowledge so that necessary efforts can be made to increase the knowledge of the rural women about homestead technologies.

### Grain Storage

Table 1.1 depicts knowledge of the respondents about storage of food grain. Regarding storage insects, it was found that none of the respondents was able to tell the scientific name of insects however, they could tell the common name of some of the insects like *Khapra* (92%) and *Ghun* (89). When asked about the improved storage structures, it was found that 32 per cent respondents had knowledge about metal bins however, none of them knew about cemented and stone slab bins. Cent per cent respondents had knowledge about treatment of bins by neem leaves however, no one knew about melathian spray before storage. All the respondents (100%) were aware of the method of sun drying for treatment of gunny bags however, no one had knowledge of treatment of gunny bags by boiling in hot water or using insecticide.

For storage of produce proper placement of structures also counts a lot. It was encouraging to note that 84 per cent respondents were aware of the fact that the storage bin should be kept above plinth level and away from the wall. Similarly 63 per cent respondents knew that storage structure should be kept away from the dampness. Another important point with regard to storage i.e. prevention from direct sunlight was known to only 38 per cent respondents. With regard to considerations while storing the produce, it was found that 98 per cent respondents knew that old and new grains should be kept separately and 78 per cent respondents had knowledge that produce should be cleaned properly before storage. The storage structure should be kept airtight was known to 70 per cent respondents. Other important precautions like proper drying of produce before storage and cooling of grain at room temperature after drying were known to only 23 and 21 per cent respondents, respectively.

When the respondents were asked about importance of using inlet and outlet in storage structure, 79 per cent respondents reported that it makes the bin moisture proof. Similarly 89 per cent respondents knew that it also checks the entry of insects and pests in the bin. None of the respondents reported that use of inlet-outlet regulates the oxygen content in the storage structure.

Sharma (2005) <sup>[1]</sup> concluded that the rural women had average

knowledge about improved post harvest technologies (51.82MPS). In storage component, majority of the respondents knew about common names of storage insects i.e. *Sureri* (100%), *khapra* (99%), *susari* (30%) and pulse beetle (10%) however, they were unaware about scientific name of insects. Regarding improved storage structures, 40 per cent respondents knew about metal bin, 22 per cent =knew about cemented bin and only 10 per cent were aware of stone slab bin. None of the respondents had knowledge about mixing of neem leaves paste for disinfestation of structure while plastering bin and use of chemicals for prevention of termites. All the respondents (100%) were aware about the method of sun drying for treating gunny bags while, a very few (2-4%) had knowledge of treating gunny bags by boiling in hot water or by using fumigant. With regard to considerations while storing produce, 98 per cent respondents had knowledge of keeping old and new grain separately while, 78 and 70 per cent respondents, respectively new that storage structure should be cleaned properly before storage and it should be kept airtight. Majority of the respondents (68%) knew that use of inlet and outlet in storage structure makes the bin moisture proof. Regarding rat control, majority of the respondents (78%) had knowledge about use of iron cages and poison bait whereas, none of them had knowledge about name of rodenticides but most of them recognized it by its color. Only one respondent had knowledge about correct method of preparing poison bait.

With regard to knowledge of the respondents about rat control, it was found that cent percent respondents had knowledge about use of iron cages and poison bait for rat control. More than 70 per cent respondents knew that the problem of rats at domestic level could be solved by making storage structure rat proof. However, they were not able to tell the exact name of rodenticides used for rat control and method of preparing poison bait. As far as precautions in the use of poison bait were concerned, it was found that though 78 per cent respondents had knowledge that the poison bait should be kept away from the reach of the children however, only 17 per cent respondents knew that bait should be kept away from water. Similarly 30 per cent respondents knew that nonpoisonous bait should be placed before placing poison bait to attract the rats. When further asked about disposal of dead rats and remaining poison bait, 89 per cent respondents had knowledge about the method of burying in the ground and no one knew about burning.

**Table 1:** Knowledge of the respondents about storage of grain n=100

S. No.	Aspect	f /%
1.	Major storage insects of wheat and maize	
	a) <i>Rhizopertha Dominica</i> (Sureri)	0
	b) <i>Tricoderma granarium</i> (Khapra)	92
	c) <i>Callosobruchus maculatus</i> (Pulse Beetle/Ghun)	89
2.	d) <i>Sitophilus Oryzae</i> (Susari)	0
2.	Scientific storage structures	32
3.	Improved storage structures	
	a) Cemented Bin	0
	b) Metal Bin	32
	c) Stone Slab Bin	0
4.	Methods of treatment of bin before storage	
	a) Neem leaves	100
	b) Midlothian spray	0
5.	Prevention of mud bin from termite attack	
	a) Use of chloropyriphos/Endosulphan/Methyl parathion 2% powder	0
6.	Treatment of gunny begs	
	a) Treatment by fumigants/ Midlothian/Nuvan or any other insecticide	0

	b) Boiling in hot water	0
	c) Sun drying	100
	Placement of Storage structure	
7.	a) Should be kept away from the dampness	63
	b) Prevented from direct sunlight	38
	c) Above plinth level and away from the wall	84
	Considerations in storage of produce	
8.	a) Proper drying of produce before storage	78
	b) Keeping old and new grain separately	98
	c) Cooling of grain at room temperature before storage	21
	d) Proper cleaning of produce before storage	23
	e) Keeping storage structure airtight	70
	Importance of inlet and outlet in storage bin	
9.	a) To make bin moisture proof	79
	b) To avoid entry of insects and pests	89
	c) To regulate the oxygen content in the structure	0
	Methods of rat control at household level	
10.	a) By making storage structures rat proof	74
	b) Use of cages	100
	c) Use of poison bait	100
	Name of rodenticides used for rat control	
11.	a) Zinc phosphide	0
	b) Anticoagulant (Rodoferin, Bromolidiyon)	0
	Method of preparing poison bait (zinc phosphide)	
12.	a) 1 Kg flour + 20-25 gm zinc phosphide + 20 ml edible oil + Jaggery	0
	Points to be kept in mind while placing poison bait	
13.	a) Nonpoisonous bait should be placed before placing poison bait	30
	b) Bait should be kept away from water	17
	c) C Bait should be kept out of reach of children	78
	Disposal of dead rats	
14.	a) By burying	89
	b) By burning	0
	Disposal of remaining poison bait	
15.	a) By burying	89
	b) By burning	0

### Conclusion

Based on the findings it could be concluded that the respondents had average knowledge about grain storage.

### References

1. Sharma R. Adoption of postharvest technologies of cereal crops by farm women of Jaipur District of Rajasthan. M.Sc. Thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan, 2005.