

# Knowledge and adoption of food grain storage practices by farm women of Pune District (Maharashtra)

P.J. UPLAP, S.S. KHANDAVE, D.R.THORAT AND N.S. LOHAR

See end of the article for authors' affiliations

Correspondence to :

**P.J. UPLAP**

Department of  
Extension, Padamshree  
Dr. D.Y. Patil College of  
Agriculture Business  
Management, Akurdi,  
PUNE (M.S.) INDIA

## ABSTRACT

The study on the knowledge and adoption of food grains storage practices followed by the women in Pune District was undertaken. In all, 170 farm women from 10 villages were selected randomly. The data were analysed and the conclusion were drawn. It revealed 100 per cent farm women had knowledge of recommended food grain storage practices. Regarding adoption of food grains storage practices, majority of the respondents adopted the method of sun drying , 94.11 per cent of farm women adopted the method of separation of infested food grains, while 75.88 per cent of them adopted the method of sieving of food grain and 59.42 per cent of farm women adopted the method of separation of broken food grains, 41.17 per cent adopted the practice of proper dunnage while 22.95 per cent adopted the use of chemical powder , 14.70 per cent of farm women adopted the practice of rearing cat and use of aluminium phosphide whereas 9.41 per cent of farm women adopted the practice to keep the store place airy and in good hygienic condition.

## INTRODUCTION

Farm women play a pivotal role in agriculture and other subsidiary occupations. Their contribution is more than 50 per cent in performing the various agriculture operations and maintenance of livestock etc. Studies in the past indicated that farm women participated in most of farm operations. One of this is storage of food grains. Their participation in post harvest practice *viz.*, threshing and storage is relatively more important than other practice. Therefore, it becomes very necessary to know their knowledge level and the methods adopted by them in food grain storage. Knowledge is the total number of recommended practices of food grain storage known to the farm women while adoption means is continuous use of recommended technologies of food grain practices by farm women performing storage activity, so while performing the storage activity many technical and economical barriers are experienced. With this regards, the study will throw light in determining the extent of knowledge and adoption of various practices in respect of food grain storage practices.

## METHODOLOGY

The study was carried in the Agriculture College Development Block, Pune. Out of 112 villages, 10 villages were randomly selected for the purpose of study. A list of farm women,

who were engaged in performing various farm operations, was prepared. From the list of 350 farm women, 170 farm women were selected by using random sampling method.

An interview schedule was prepared, so as to get accurate information. Suitable questions were included to determine the knowledge and adoption of food grain storage practices followed by the farm women. The statistical tools and test such as frequency and percentage, have been used in the study for the analysis of the data.

## RESULTS AND DISCUSSION

Adoption is a mental and behavioural process in which stages *i.e.* awareness, interest, trial, decision and adoption pass through the various stages in its literal meaning. The term adoption means the continuous use of recommended technologies of food grain practices by farm women performing storage activities. Knowledge and adoption regarding various food-grain storage practices *viz.*, mechanical control, natural, chemical control, maintenance of storage places and control from rodents etc. have been discussed in this paper.

### Mechanical control method :

The results of mechanical control are presented in Table 1. It is revealed that from the table that almost 100 per cent of farm women had knowledge in respect of

### Key words :

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mechanical control method *i.e.* sieving of food grains after threshing, separation of broken food grains and separating the infested food grains. However, the data regarding adoption of food grain storage practices (Table 1) indicate that most of farm women 94.11 per cent were practicing the method of separating infested food grains. Majority of farm women (75.88 per cent) were sieving the food grain after threshing, and 59.42 per cent of farm women were adopting the practice of separating broken food grains by sieving.

#### Natural method :

The data regarding knowledge of natural method (Table 2) indicate that 100 per cent of farm women had knowledge about sun drying of food grain, protecting the food grain from moisture. This finding is in line with Srivastava *et al.* (1979). Also 99.41 per cent of farm women had knowledge about use of wooden plank, and the same percentage had knowledge of keeping gunny bags on plastic paper.

As far as adoption of natural method is concerned most of the women were practising method of sun drying and 41.17 per cent were practising proper dunnage. This finding is in line with Srivastava *et al.* (1979) who reported that, 24.74 per cent were keeping distance between gunny bags and wall, while very few (5.88 per cent) of them had used wooden plank and only 2.35 per cent were keeping gunny bags on plastic paper.

#### Storage structures for food grains storage :

From Table 3 it is revealed that knowledge of using various storage structures indicate that majority (57.64 per cent) of farm women had knowledge about storage structures like barrel, 15.88 per cent had knowledge of improved grain Kothi, while 11.76 per cent had knowledge about Pucca bin, and very few (5.88 per cent) had knowledge about Silo Kothi as a storage structure.

Regarding the adoption of storage structures, data indicates that 5.88 per cent of farm women were using improved grain Kothi, while 4.11 per cent of them were

**Table 1 : Knowledge and adoption of recommended mechanical control of food grain storage practices by farm women**

Sr. No.	Particulars	Knowledge			Adoption		
		Complete	Partial	No.	Complete	Partial	No.
<b>Mechanical control</b>							
1.	Sieving of food grains	170 (100)	-	-	129 (75.88)	-	41 (24.1)
2.	Separation of broken food grains	170 (100)	-	-	101 (59.42)	-	69 (40.58)
3.	Separating the infested food grains	170 (100)	-	-	-	-	10 (5.88)

**Table 2 : Knowledge and adoption of recommended natural method of storage of food grain by farm women**

Sr.	Particulars	Knowledge			Adoption		
		Complete	Partial	No.	Complete	Partial	No.
1.	<b>Natural method</b>						
	Sun drying	170 (100)	-	-	70 (41.17)	-	100 (58.83)
2.	<b>Protection from moisture</b>						
	Proper dunnage	170 (100)	-	-	70 (41.17)	-	100 (58.83)
	Use of wooden planks	169 (99.41)	-	1 (0.59)	4 (2.35)	-	166 (97.65)
	Keeping gunny bags on plastic paper	160 (94.11)	-	10 (5.89)	4 (2.35)	-	166 (97.65)
	Keeping gunny bags away from wall	170 (100)	-	-	42 (24.71)	-	128 (75.29)

**Table 3: Knowledge and adoption of recommended storage structures of food-grain storage practices by farm women**

Sr. No.	Particulars	Knowledge			Adoption		
		Complete	Partial	No.	Complete	Partial	No.
<b>Use of storage structure</b>							
1.	Improved grain Kothi	27 (15.88)	-	143 (84.12)	10 (5.88)	-	160 (94.11)
2.	Silo Kothi	10 (5.88)	-	160 (94.12)	-	-	170 (100)
3.	Barrel	98 (57.64)	-	72 (42.36)	7 (4.11)	-	163 (95.88)
4.	Pucca bin	20 (11.76)	-	150 (88.24)	-	-	170 (100)

**Table 4: Knowledge and adoption of recommended chemical control measures of food grain storage by farm women**

Sr. No.	Particulars	Knowledge			Adoption		
		Complete	Partial	No.	Complete	Partial	No.
<b>Chemical controls</b>							
1.	Use of chemical powder	50 (29.41)	-	120 (70.59)	39 (22.95)	-	131 (77.05)
2.	Use of EDB ampoules and Aluminum phosphate	17 (10.00)	-	153 (90.00)	9 (5.29)	6 (3.53)	155 (91.18)

**Table 5: Knowledge and adoption about maintenance of store place of food grain storage by farm women**

Sr. No.	Particulars	Knowledge			Adoption		
		Complete	Partial	No.	Complete	Partial	No.
<b>Maintenance of store place</b>							
1.	Keeping stored place airy	167 (98.23)	-	3 (1.77)	16 (9.41)	-	154 (90.58)
2.	Spraying of insecticide	27 (15.88)	-	143 (84.12)	13 (7.65)	-	157 (92.35)
3.	Keeping stored place in good hygienic condition	170 (100)	-	-	16 (9.41)	-	154 (90.58)

**Table 6: Knowledge and adoption of recommended practice of rodent control by farm women**

Sr. No.	Particulars	Knowledge			Adoption		
		Complete	Partial	No.	Complete	Partial	No.
<b>Control from rodents</b>							
1.	Rearing cat	168 (98.82)	-	2 (1.18)	25 (14.70)	-	145 (85.30)
2.	Use of trap	170 (100)	-	-	22 (12.95)	-	148 (87.05)
3.	Use of zinc phosphate, aluminium phosphate	41 (24.11)	-	129 (75.89)	25 (14.70)	5 (2.95)	145 (82.35)

adopting barrel as a storage structure. Not a single woman had either used Silo Kothi or Pucca bin for storage structure.

### Chemical control :

The data regarding knowledge of chemical control from Table 4 indicate that 29.41 per cent and 10.00 per cent of farm women had knowledge in respect of use of chemical powder *viz.*, boric powder and use of fumigant like EDB, respectively.

However, only 22.95 per cent of farm women were adopting the practices of using chemical powder. This finding is in line with Dixit *et al.* (1996) and very few of them 5.29 per cent were using EDB, as fumigant. This finding is in line with Chandargi (1980).

### Maintenance of stored place:

The results of Table 5 showed that almost all the farm women had knowledge about keeping food grains in stored place in good hygienic condition. Most of them 98.23 per cent had knowledge to keep go down airy and while only 15.88 per cent of the farm women had knowledge of spraying of insecticides.

Very few (9.41 per cent) farm women were practicing the methods of keeping food grains in stored place airy and keeping stored place in good hygienic

condition and 7.65 per cent were practicing the spraying of insecticides at storing place.

### Control from rodents:

The results are presented in Table 6. It is revealed from table that almost all (100 per cent) of the farm women had knowledge about use of trap and 98.82 per cent had knowledge of rearing cat, however about one fourth (24.11 per cent) had knowledge about use of zinc phosphate for killing rats.

As regards the use of these practices, nearly equal proportion 14.70 per cent of the farm women had reared cat and used the zinc phosphate and aluminium phosphate for control of rats and 12.95 per cent of them had followed the practice of using trap.

### Authors' affiliations:

**S.S. KHANDAVE**, Department of Agriculture Extension, College of Agriculture, PUNE (M.S) INDIA

**D.R. THORAT**, College of Agriculture, Retre, SATARA(M.S.) INDIA

**N.S. LOHAR**, Padmashree Dr. D.Y. Patil College of Agriculture Business Management, Akurdi, PUNE (M.S.) INDIA

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