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Constraints and Suggestions Made by Farmers about Modern Practices for the Storage of Food Grains

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Abstract: *The present investigation was undertaken in Sangli district of Maharashtra state. From the district 132 farmers were selected from the core area of the district with the purposive selection. After data collection and analysis of 132 samples it is revealed that a majority of the farmers were reported the constraints namely, lack of knowledge regarding identification of stored grain pest, unavailability of different storage structure, high cost of storage structure, inadequate place for storage of food grain, loan availability from the government. Suggestions made by the farmers like demonstrations about storage of food grain for knowledge. Followed by suggest that to available the storage material on low cost. Farmers also suggest that bank should give loan or money on the basis of stored grain receipt given by the godowns.*

Keywords: Constraints, Food Grains, Modern Practices, Storage, Suggestions.

INTRODUCTION

Food grain comprising of cereals, millets and pulses is the primary and staple food of majority of the population in India. For fetching higher prices to the food grains in the market not only production of grains is important but storage of grains is very important. It is reported that about 30 per cent losses in food grains is due to unavailability of storage facilities, and lack of knowledge regarding storage. The production of food grains is seasonal, but their consumption is uniformly spread throughout year. Post harvest losses in India around to 12-16 million metric tons of food grains each year; in Maharashtra 20.06 MT hence the agriculture commodities need to be stored. The storage losses have been estimated to the extent of (6.58%). Largely from rodents (2.50%), birds (0.58%), moisture (0.68%).

India is emerge as one of the leading developing country in the front of agricultural economy resulting in increased food grain production, touching more than 257.13 million tone in the year 2012-13, and in the year 2013-14 the total food grain production was more than 264.77 million tonenes and the Maharashtra state produce food grain production in 2013-14 was 13.92 million tonnes which share 5.26 per cent about total food grain production of India. (Anonymous, 2015). India is experiencing colossal losses of food grains in storage. In 2010, as per official reports, loss of 11,700 tonnes of food grains was reported to have occurred in the government godowns. In a surplus producing state like Punjab alone, out of procurement during 2008-09 and 2009-10, loss of 48,000 tonnes wheat was reported to have rotten, the stock which is enough to feed around five lakh people for a year (Chahal, 2011). At farmers level also about 10 per cent of the grain that reaches the consumers, after hard labour of farmers and use of scarce capital resources, is lost due to faulty and unhygienic storage conditions.

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The post harvest losses of food grains and oilseeds are estimated to be 10 to 20 per cent while that of different horticultural crops vary from 15 to 50 per cent (Chahal, 2011) in developing countries including India. The bulk of these losses occur during storage for most of the commodities. The storage losses are due to biotic factors such as rodents, insects and pests; micro biological factors such as fungi and bacteria. Chemical factors resulting in loss of colour, flavour, texture and nutrient value and most importantly abiotic or mechanical factors due to faulty storage structures.

It is reported that about 30 per cent losses in food grains is due natural contamination of food grains is greatly influenced by environmental factors such as to unavailability of storage facilities, temperature, moisture etc. during storage quantitative and qualitative losses occurs due to insect, rodents and micro-organism. Also lack of knowledge regarding storage. Farmers store food grain by using different storage structure and use various practices in household. Various practices followed by farmers for storage of food grains while adopting these practices of food grain storage, the farmer faced many. Based on this fact to find out best Modern practices followed by the farmers for food grain storage and also to document these practices and to identify the constraints of these farmers the study has undertaken with the specific objective of: To study the constraints faced and suggestions made by farmers for storage of food grains.

METHODOLOGY

The present study was conducted in Tasgaon, Jat and Miraj tahsil of Sangli district. 4 villages were selected from each tahsil for study. From each village 11 respondents were selected, total 132 respondents were selected by using proportional random sampling. To conduct the research an Expost-facto design of social research was used in the present investigation. Keeping in view the objectives of the study, structured interview schedule was designed which contains questions to collect the data of independent variable and dependent variable about modern practices followed by the farmers for storage of food grains. Interview schedule was suitably modified after pretesting of ten farmers and data were collected through personal interview of the respondents at their convenient place. The data were tabulated and processed through the primary and secondary tables. Data thus collected was analysed using appropriate statistical tools i.e. SD, Mean, Frequency and Percentage, respectively.

RESULTS AND DISCUSSION

Constraints faced and suggestion made by the farmers:

Constraints

The data regarding various constraints faced by the farmers in storage of food grains were collected and are given in Table1.

Lack of knowledge

The data presented in Table 1 revealed that the important constraints faced by the respondents were identification of stored pest (82.58%), followed by chemicals and their proportion in use (53.70%), lack of knowledge for storage of food grain (46.21%), Lack of information in storage (41.66%), Nature of damage by stored grain pest (37.12%), Nature of damage due to diseases (37.12%).

Unavailability of material

Table-1 revealed that majority 59.99 per cent of the respondents faced constraints like unavailability of different storage structure followed by unavailability of chemicals for storage (57.57%), and unavailability of spray pump and dusters (18.18%).

Storage house

Table-1 revealed that majority 63.63 per cent of the respondents faced constraints like unavailability of storage house.

Economic/Cost reduction

Table-1 observed that majority (90.15%) of the farmer faced constraints in respect of high cost of storage structure followed by unavailability of loan with low interest (48.48%), high cost of chemical (34.09%).

Table 1
Distribution of the respondents by their constraints faced in the adoption of the modern food grain storage

Sr. No.	*Particulars*	*Frequency*	*percentage*
A)	Lack of knowledge		
1.	Identification of stored pest	109	82.58
2.	Nature of damage by stored grain pest	49	37.12
3.	Insecticides and their proportion in use	71	53.78
4.	Lack of information in storage	55	41.66
5.	Lack of knowledge for storage of food grain	61	46.21
6.	Nature of damage due to diseases	49	37.12
B)	Unavailability of material		
7.	Different storage type of storage structure	78	59.99
8.	Chemicals for fumigation	76	57.57
9.	Equipment for fumigation	24	18.18
C)	Storage house		
10.	Lack of availability of storage houses	84	63.63
D)	Economic / Cost reduction		
11.	High cost of storage structure	119	90.15
12.	High cost of insecticide	45	34.09
13.	Unavailability of loan with low interest	64	48.48
E)	Place		
14	Inadequate place for storage	54	40.90

Constraints regarding place

Table 1 found that famer faced constraints of inadequate place for storage (40.90 per cent) in food grain storage practice. The study has brought out some important constraints in storage of food grains. The concerned agencies should take suitable steps for reducing the intensity of these constraints in the region.

These observations are in line with the findings of Parvathil *et al.* (1990), Waman (2000), Uplap (2003) and Chavan (2009).

Suggestions

The data regarding various suggestions made by the farmers in storage of food grains were collected and are presented in Table 2.

Suggestions for knowledge

The data presented in Table 2 revealed that the Important suggestion of the respondent were 60.60 per cent need the demonstrations about storage of food grain. Followed by (59.09%) farmer suggests providing information booklet of food grain storage and 42.42 per cent respondents wants guidance from the Agriculture assistance about storage of food grains.

Suggestions availability of material

The data presented in Table 2 revealed that the important suggestions about material availability. 75.00 per cent respondents suggest providing storage material from Agriculture department. Followed by sprayer and duster must be made available in Tahsil level (30.30%), and 29.54 per cent respondent suggest to provide chemicals by the Agriculture department.

Table 2
Distribution according to suggestion made by the farmers in the adoption of the modern food grain storage practices

Sr. No.	*Particulars*	*Frequency*	*percentage*
A.	Suggestions for knowledge		
1.	Need of demonstration	80	60.60
2.	Guidance from Agriculture Assistance and seller	56	42.42
3.	Provide information booklet about food grain storage	78	59.09
B)	Suggestions for availability of materials		
4.	Provide storage material by Agriculture department	99	75.00
5.	Provide fumigants by Agriculture department in Village	39	29.54
6.	Provide fumigation equipments at Tahsil level	40	30.30
C)	Suggestions for storage house		
7.	Availability of material in low cost	119	90.15
8.	Develop public-private partnership storage of food grain in village	72	54.54
D)	Suggestions for cost reduction		
9.	Provide subsidy for purchasing storage material	122	92.42
10.	Availability of chemicals in low cost	98	74.24
11.	Loan available for the buying storage material in low interest	30	22.72
12.	Bank Have to give loan on the basis of receipt of storage food in godowns	22	16.66

Suggestions storage house

The data presented in Table 2 revealed that the important suggestion Storage house. 90.15 per cent respondent suggests that made available the storage material on low cost and 54.54 per cent respondents want to develop public-private partnership for storage of food grain.

Economic suggestions

The data available in Table 2 observed that the important suggestion in relation to economics. 92.42 per cent farmer suggests to provide about subsidy for buying storage material. 74.24 per cent respondents want the chemicals with low prize. Loan should be made available with low interest rate (22.72%), and one important suggestion obtained by the respondent that bank has to provide loan on the receipt of storage material in godowns that is 16.66 per cent.

CONCLUSIONS

The present study concluded that a majority of the farmers were reported by considerable number of respondents the constraints namely, is that lack of knowledge regarding identification of stored grain pest this was the major knowledge constraint faced by the respondents. It is, therefore, suggested that the extension agencies may take suitable measures to provide the technical knowhow of this pest to the farmers. Unavailability of different storage structure and high cost of storage structures were the other major constraints faced by the farmer in storage of food grain. It is, therefore suggested that improved storage structures should made available at subsidized rates. Financing agencies should also come forward to arrange loan provision for purchase and for construction of storage structures. The findings will be useful to planners, policy makers and administrative officials for deciding future policies and new strategies on storage of food grains.

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