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RESEARCH ARTICLE

Awareness on safe grain storage practices among rural women

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ABSTRACT : Women play an important role in sustaining and improving food security at global, national, community and household levels in various ways. Majority of women are involved in some agricultural activities and earning for their family among the foodgrains. Pulses are widely grown throughout the world and their dietary and economic importance is globally appreciated and recognized. The present study was conducted in Gonda district during 2012-2013. Multistage random sampling technique was adopted for the study. Total 80 respondents were selected from the village, Rasoolpur. The data were analyzed and tabulated statistically. Further, after studying the safe grain storage, it was found that 48.75 per cent women respondents were engaged to their family farms. Whereas 22.50 per cent women's were facing problems to lack of education.

KEY WORDS : Storage practices, Awareness, Food grains

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INTRODUCTION

Farmers and traditional grain processors have been evolving number of traditional practices through trial and error method, to avoid huge loss that are occurring in stored, to avoid huge loss that are occurring in stored pulse grains due to insect and pest infestation Pushpamma and Rao (1980). Women folk have accumulated knowledge of household practices over generations by observation, experimentation and by handling age old people's experiences and wisdom. Certain practices are unique to a given culture of a society and very between countries, regions, villages and even communities. Indigenous practices emanate from the cultural contact of the people concerned and evolve in close contact with specific environmental conditions and are based on traditional societies intimate knowledge of their environment. these reasons imply that indigenous knowledgeis ecofriendly and safe both to man and his environment. It is estimated that 60-70 per cent of food grains produced in the country is stored at home level in indigenous stuctures ranging from bamboo baskets to mud structures, gunny bags and modern bins (Kanwar and Sharma, 2003; Channal *et al*.,2006). Indigenous knowledge is a type of knowledge, which has evolved within the community and has been passed on from one generation to another (Natarajan and Santha, 2006). Proper storage of food grains is necessary to prevent spoilage, increase keeping quality and for manetary reasons. The practice of using natural sources for storage of various household items dates back to the very earliest periods of known history. There is evidence of known history. There is evidence of ash, sand and herbs used in encient civilization, which have been credited with mystical power for increasing storage life. Many of these

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practices find their credibility even in the modern era.The logic behind the use of this material is that they are user fiendly and are also associated with scientific reasoning (Nagnur *et al.*, 2006). Hence, the study was carried out with an objective to document the traditional storage practices adopted by the dry land farmers of Tamil Nadu.

The storage of food grains has been an age long practice with cultivators and traders. More pest–free storage is needed for handling crops at harvest time and to carry over reserves from year to year. Considerable losses both in quality and quantity of foodgrains take place in storage due to a number of factors. Organisms directly are responsible for causing loss in stored products as insects, mites, rodents, fungi and bacteria.

Among them, insects and mites are the most important hazards to the safe storage of grains. The insects that attack stored grains are rather general feeders, but some of them prefer certain grains. It is estimated that 5–10 per cent of the stored grain is lost every year due to insect damage in India.

Safe storage guidelines are needed for all common grains at expected moisture contents and temperatures during storage (Rani *et al.*, 2013). The present study aimed to investigate the effect of storage temperatures, seed moisture content and storage period on biochemical, microbial and physical changes in the Pinto beans at several moisture contents. The Pinto beans at higher moisture contents (16, 18 and 20 % w.b) must be due to lower levels 8, 5 and 3 weeks, respectively for prolong period storage.

Cereals and pulses have great biological and nutritional value in human diet (Singh *et al.*, 2012). The losses during growing crops and post harvest handling, processing, storage and distribution system vary between 20-60 per cent. Three major groups of storage enemies are fungi, insects and rodents. Oils from plant origin are one of them, which have been found to possess insecticidal properties an advantage is that they are easy to apply.

Objective :

The present study was conducted to study the knowledge and practices about the safe grain storage in pulses among rural women.

METHODOLOGY

To complete the above objective the appropriate research methodology was employed and the study was conducted in Gonda district during 2012-2013. Multistage random sampling technique was adopted for the selection of respondents. Gonda district is divided into many blocks. One block was selected randomly and the block consists of various villages, from which one village was selected randomly. Total 80

Table 1 : Distribution of rural women according to pre-storage practices

Sr. No.	Categories	Yes	No	Mean score
1.	Drying of grains before storage	100.00	0.00	2.00
2.	Removal of moisture content	56.25	43.75	1.56
3.	Not storing old red gram with new red grams	40.00	60.00	1.40
4.	Using new bags	56.25	43.75	1.56
5.	Cleaning red gram before storage	87.50	12.50	1.88
6.	Removal of broken and infested grains stones and other forging bodies	81.25	18.75	1.81
7.	Protection of grain from insects-pests, rodents, birds	97.50	2.50	1.98

Table 2 : Distribution of respondents according to care required during storage

Sr. No.	Categories	Yes	No	Mean score
1.	Use of red dust to protect red gram from insect-pest	2.50	97.50	1.03
2.	Use of cow dung to avoid attach of insects	75.00	25.00	1.75
3.	Removal of damaged grains	1.25	98.75	1.01
4.	Drying in between storage	81.25	18.75	1.81
5.	Proper staking of bags	75.00	25.00	1.75
6.	Keeping bags away from the walls	87.50	12.50	1.88
7.	Treatments of red gram with insecticides in case of spoilage	85.00	15.00	1.85

Table 3: Distribution of respondents according to post storage practices

Sr.No.	Categories	Yes	No	Mean score
1.	Closing doors and windows in rainy season	100.0	0.00	2.00
2.	Cleaning and disinfesting bags after use	87.50	12.50	1.88
3.	Not using very old containers or torn bags	75.00	25.00	1.75

respondents were selected randomly from the village for the present study. The collected data were subjected to statistical analysis for which statistical tools, percentage, weighted mean, correlation co-efficient and Chi-squire test were used (Gomez and Gomez, 1984).

OBSERVATION AND ASSESSMENT

It is evident from the Table 1 that in reference to pre-storage practices, 100.0 per cent of respondents were doing the drying of grains before storage with mean score of 2.00, whereas 97.50 per cent of women respondents were aware of protection of grain from insect-pests, rodents, birds with mean score of 1.98, while 87.50 per cent of respondents cleaned the infested grains before storage with mean score of 1.88. About 81.25 per cent of women respondents removed the broken and infested grains with mean score of 1.81. Remaining 56.25 per cent respondents used new bags for the storing of red gram with mean score of 1.56 and the same percentage of (56.25) respondents were involved in removal of moisture content from red gram with the same mean score (1.56). Similar work was also done by Balasubramaniam and Menon, 1977; Sinha and Prashad,1966 and Subba Reddy and Channegowda, 1982).

Care required during storage :

Table 2 shows that the majority of the respondents (87.50 %) per cent were keeping bags away from the walls during storage practices with mean score of 1.88, whereas 85.00 per cent of respondents were found to use insecticides in condition of spoilage of red gram with mean score of 1.85, While 81.25 per cent of respondents were found to do the drying of grains between storage with mean scores of 1.81., 75.00 per cent of respondents adopted proper staking of bags with mean score of 1.75, whereas 75.00 per cent of respondents were found to use cow dug to avoid attack of insects with mean scores of 1.75. About 2.50 per cent of respondents used red dust to protect the red gram with mean score of 1.03. A very small percentage of respondents (1.25) were found to remove the damaged grain with mean score of 1.01(Jaiswal *et al.*, 1996 and Raje, 1991).

Care required for post storage practices :

It is revealed from the Table 3 that 100 per cent of respondents were aware about protection of red gram in rainy season. They used to close the doors and windows in rainy season during post storage practices and have mean score of 2.00. Whereas 87.50 per cent of women respondents were doing cleaning and disinfesting bags after use with mean score of 1.88, while two third of the respondents (75.00) per cent of women have not been using very old container or torn bags for storage of red gram with mean score of 1.75 (Sethi and Malaviya , 1996 ; Upadhyay and Gupta,1987).

Conclusion :

On the basis of the present study, it can be concluded that majority of the respondents (87.50) per cent were keeping bags away from the walls during the storage practices. 100 per cent respondents were aware about protection of red gram in rainy season. They used to close the doors and windows in rainy season during the post storage practices and two third women respondents were not using very old container or torn bags for storage of red gram.

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