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Management practices adopted by farmers for storage of food grains and fodder

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ABSTRACT : The post-harvest losses in grains and horticultural crops have been reported to be more (15-50%) in recent past. Farmers are practicing various control measures to protect the grains from losses caused by various factors. An attempt has been made to document different measures followed by farmers for safe storage of grains. The study was conducted in Dharwad taluk of Dharwad district of Karnataka state with the sample size of 40 farmers. The data was elicited through the personal interview method. In the preparatory stage, sun drying and cleaning of food grains were followed, practically by all the farmers (100.00 %). Majority of the farmers (80.00 %) used zink phosphide as a measure of rat control.

Key Words : Food grains, Storage structures, Control measures

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Agriculture has made a steady progress since the mid–sixties with the advent of green revolution during which period the country moved forward from a state of low productivity to one of self – sufficiency in food grains. 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 losses during storage are mainly due to the storage method adopted by the farmers and management practices adopted by farmers. The damage is affecting both quality and quantity of grains. With lower human and livestock population in the past, the animals had accessibility to adequate quantity of forage, crop residues and concentrates. But now the scenario of forage production and utilization envisages a different picture. The gap between the supply and demand for good quality forage continues to enlarge owing to constraints *viz*,. land and resource inputs. Hence, it is essential to know the different grain storage practices followed by farmers, so that effective storage practices can be recommended to the farmers.

RESEARCH PROCEDURE

The study was conducted in Dharwad taluk of Dharwad district of Karnataka state. Dharwad taluk was purposively chosen because it is a predominantly agricultural taluk. Since the main objective of the study was to enlist various methods followed by farmers to combat problems in storage which included different aspects of storage of food grains such as fumigation, chemical control of rats, disinfestation of storage structures, etc. It was felt necessary that the respondents chosen for the study should have sufficiently involved such of the things. Accordingly list of farmers who were directly or indirectly involved in storage of food grains of the family was prepared for each village separately. All these farmers constituted the population for the study. The pretested interview schedule was used to collect the data by personal interview method. The data collected were tabulated and analyzed by using suitable statistical measures.

RESEARCH ANALYSIS AND REASONING

The result presented in Table 1 reveals the measures followed by the respondents before and after the storage of food grains. In the preparatory stage, sun drying and cleaning of food grains were followed practically by all the farmers (100.00 %). Nearly 47.5, 20.00 and 15.00 per cent of the respondents followed the practices of sun drying the storage structures, smearing dung to bamboo storage structure and cleaning storage bins/bags, respectively.

Aftercare practices of drying the food grains in between storage period, cleaning and dusting with malathion were followed by 30, 42.5 and 25 per cent of the respondents, respectively.

It is clear from the Table 2 that majority of the farmers (80.00 per cent) used zink phosphide as a measure of rat control, whereas 15 per cent of them used rat traps.

It is clear from Table 3 that heaping groundnut husk spreading redgram stalks by layer wise, rice straw and wheat brawn mixed with the water was followed by 35.0 per cent of the respondents. Whereas jowar crop residues were stored by 60 per cent and storing fodder of cereals and pulses by 35 per cent of the respondents.

Spreading red gram stalks, rice straw and wheat brawn mixed with water on stored crop residues was followed by several numbers of respondents to reduce storage losses of crop residues. Farmers were also practicing spreading of plastic sheet on crop residue heaps and tying jowar crop residues in bundles keeping them on heaps to reduce loss of stored fodder from wind and to protect from the rains.

On the other hand farmers also expressed that there is slight change in storage of crop residues. They expressed that now a day farmers are storing crop residues in small quantities and they are storing less no. of crop residues and they are practicing different control measures to avoid losses of fodder during storage.

Conclusion :

The study revealed that farmers are following various post-harvest management practices or control measures, but some practices like cleaning of storage structure before storage, disinfecting storage bins/bags with malathion and use of rat traps were not used by majority of the farmers. It is important to popularize these practices to check storage loss of grains at farmers level.

Table 1: Measures used by the respondents to store the food grains (n=40)

Measures	Number	percentage
Preparation		
Food grains		
Sun drying	40	100
Cleaning	40	100
Storage structures		
Sun drying storage structure before storage	19	47.5
Cleaning	8	20
Smearing dung to bamboo storage structure before storage	6	15
Disinfecting storage bins/bags with malathion	-	-
After care		
Drying food grains in between the storage period	12	30
Cleaning (if infestation noticed)	17	42.5
Dusting malathion on the bags	10	25

Table 2: Rat control measures taken by the respondents **(n=40)**

Sr.No.	Rat control measures	Number	Percentage
1.	Zink phosphide	32	80
2.	Rat traps	6	15

Table 3: Fodder storage methods **(n=40)**

Sr.No.	Method of storage	Number	Percentage
1.	Storing fodder of cereals and pulses by layer wise, spreading red gram stalks, rice husk and wheat brawn mixed with over the heap	17	42.5
2.	Jowar crop residues are stored by heaping and spreading red gram stalks, rice husk and wheat brawn mixed with water over the heap	24	60
3.	Heaping ground nut husk, spreading red gram stalks, rice husk and wheat brawn mixed with the water over the heap	14	35

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