

Impact of different grain storage systems on quality of grains

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■ **ABSTRACT :** In a country like India, where 70 per cent of farm produce is stored for local consumption, there is urgent need to provide safe storage facilities at the farm level and house-hold levels immediately after harvest. Small-scale and subsistence farmers must store and protect their grain until it can be marketed or consumed. Keeping in view the above facts, three grain storage system of small capacity (*i.e.*, Tanki, Kuthala and Kothi) were tested to find out the proper storage of grains and seeds. At Krishi Vigyan Kendra, Tepla, Ambala an investigation was carried out during the year 2005-06. From 9 villages of Saha block of Ambala district (Haryana), 60 respondents (farm women) were randomly selected from low-income group (LIG) families. Data were collected through structured pre-tested personal interview schedule. The results showed that majority of the farm women (55 %) used Sheet Tanki for storage of grains, 35 per cent used Kuthala and 10 per cent used Kothi for safe storage of grains. The results revealed that majority (85 %) of the farm women were of the view that sheet Tanki is costly but they liked it because it needed little maintenance cost. Although, Kuthala and Kothi needed time- to-time maintenance but quality of grains was not affected in Kuthala and Kothi because they absorb moisture from grains and chances of infestation of insect-pest were reduced to a great extent. The results also revealed that small capacity storage system was mainly (90 %) used for grain storage purpose whereas 10 per cent for the seed storage purpose. Conclusively, 100 per cent population was using sheet Tanki for storage of grains whereas maximum respondents reported that quality of the grains remained good in Kuthala and Kothi system as compared to that of Tanki.

■ **KEY WORDS :** Grain storage, Bins, Infestation, Insect-pests, Storage system

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Over the last 25 years, the role of women in agriculture has become a familiar and well developed subject, broadly speaking, the early studies legitimized the idea of women as productive partners in agriculture, discovering and documenting the various roles played by women as farmers, farm wives and agricultural professionals and recounting the stories of successful women in these roles (Krishnamurthy *et al.*, 2011). After the post-harvest operations, women play an important role in storage of grains. The importance of food grain storage is self-evident to our modern society where food losses signify an intolerable waste of our limited resources. However, without the development of appropriate technologies, food losses during storage can and frequently do result in disastrous waste. In the country like India, where farmers for local consumption store 70 per cent of farm produce, there is urgent need to provide safe storage

facilities at the farm level and household level immediately after harvest. Small-scale and subsistence farmers must store and protect their grain until it can be marketed or consumed and this often poses insurmountable problems due to insect infestations and mold (fungus) development. Farmers store grains in bags, bulk and using different types of storage structure made from locally available materials, but due to inappropriate design and construction, it often causes major losses of grains. The pre-treatment necessary for better storage life is cleaning and drying of grains but design and its construction is also a vital role in reducing or increasing the losses during storage (Mohapatra and Mohapatra, 2007). For storing of grains at household level, farm women generally use Tanki (made of iron sheet), Kuthala (made of mud and wheat straw) and Kothi (made of sand, cement, iron etc.) in Ambala district of Haryana. The present study on farm trial