

Rice Storage Systems

Rice storage facilities take many forms depending on the quantity of grain to be stored, the purpose of storage, and the location of the store. It is recommended that rice be stored in paddy form rather than milled rice as the husk provides some protection against insects and helps prevent quality deterioration. Requirements for a good storage system include

- Prevention of moisture re-entering the grain after drying
- Protection from insects, rodents and birds
- Ease of loading and unloading.
- Efficient use of space
- Easy to maintain and manage

Types of Grain Storage systems

Grain storage systems can be classified as either bag or bulk.

Open Bag storage system

Grain is stored in 40-80kg bags made from either jute or woven plastic. Depending on the size of storage, these bags are normally formed into a stack. Some farmers use bag storage in outside granaries, which have been constructed from timber or mud/cement or large woven bamboo or palm leaves.



Hermetic Sealed storage



Sealed or hermetic storage systems are a very effective means of controlling grain moisture content and insect activity in tropical regions. These systems vary in size from 1-300 tons. By placing an airtight barrier between the grain and the outside atmosphere the moisture content of the stored grain will remain the same as when the storage was sealed. Smaller 50kg hermetic bags which fit inside the traditional bags are also available

Bulk storage

Granaries

At farm level grain is often stored in bulk in small outside granaries or in woven baskets or containers made from wood, metal or concrete, which are located under or inside the house. These storages vary in capacity from 200-1000kg. Losses from insects, rodent, birds and moisture uptake are usually high in traditional bulk storage systems.



Silos

The large export mills and collection houses sometimes use metal or concrete silos. These silos range in size from 20-2,000 ton capacity. Silos have the advantage that they can be more easily sealed for fumigation and less grain is spilt or wasted. Bulk storage warehouses are not very common in Asia

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