

# Storage and preservation of maize on the cobs in the granaries

Maize may be stored as grains or on the cobs. In regions with two rainy seasons and two dry seasons, long rainy season maize is dried and pre-stored on cobs in granaries made from plant materials, which are constructed according to models adapted to each environment. This data sheet describes how granaries are used for drying, storing and preserving maize on the cobs.

## Choice and preparation of pre-storage structure

The type of granary to be constructed depends on the type of materials available in the area. To construct any type of granary, the following must be taken into account;

- Have the granary built (not on a moving or sloping ground, not under a tree) by a specialist;
- In case the granary exists, it will be necessary to:  
*Restore the granary's materials by replacing rotten wood, cleaning its surroundings and burning the waste;*
- Sweep inside the granary to remove residues from the old stock that can serve as breeding places for insects;



Fig. 1: Plant materials granary

- Dry the cobs so as to reduce the water content of the grains to between 12% and 13%;
- All areas around the granary should always be clean to prevent the stored cobs from becoming contaminated.

## Pre-storage operations and quality of maize to be stored

Before storing maize you need to:

- Remove husks from each cob.
- Sweep the interior of the granary
- Ensure that the maize to be stored is clean and free of insect infestations, otherwise it must be cleaned and sorted in order to remove all moldy, damaged and perforated grain, as well as insects



Fig. 3: Granary from Palm tree

- and foreign bodies (leaves, pebbles, pieces of wood, etc.).
- Do not mix and store maize on cobs harvested in different periods and of different qualities in the same granary.

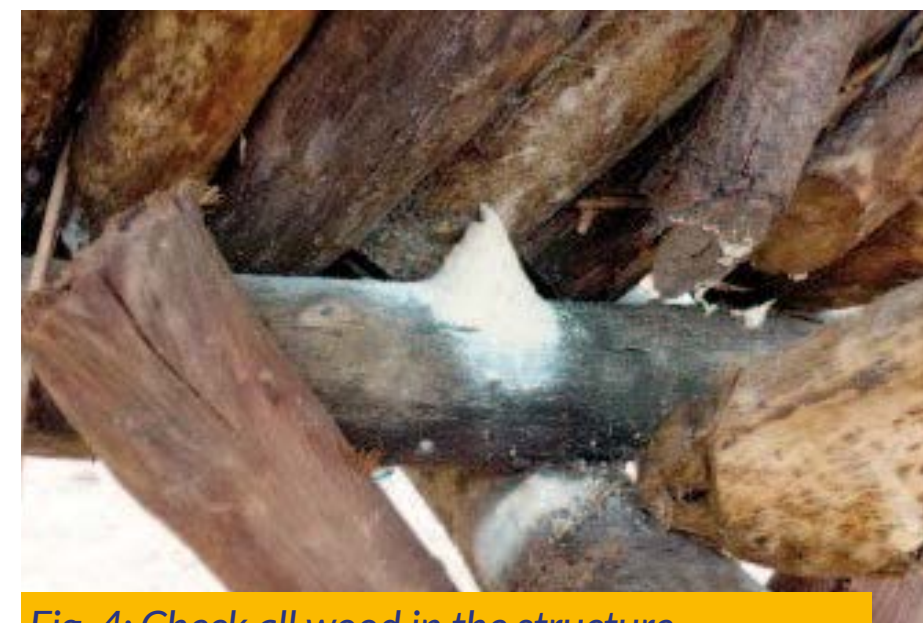


Fig. 4: Check all wood in the structure



Fig. 2 : Granary from Bamboo lofts



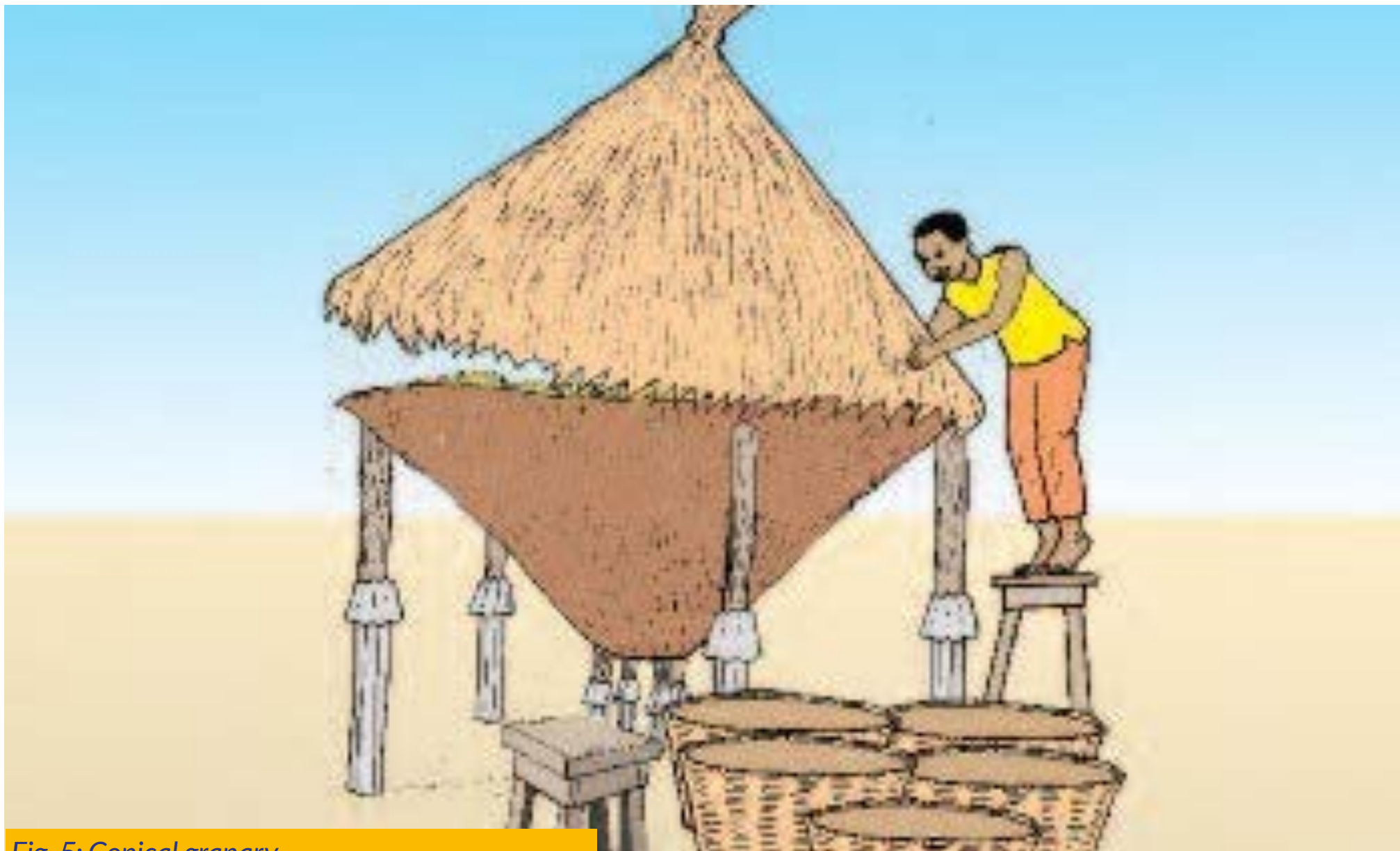


Fig. 5: Conical granary



Fig. 6: Maize cobs in a conical granary

## How to store in the improved conical wooden granary

Once the granary is available, it is necessary to:

- Use granaries that can hold up to 2 tons of maize cobs.
- Avoid putting loose grains in the granary as they clog spaces between maize cobs and hinder air circulation.
- Arrange the sorted maize cobs in the granary, with the lower part facing outwards in successive layers. One layer corresponds to 3 solid basins, i.e. 50 kg.
- In case of long term pre-storage, disinfect maize cobs using insecticides such as Actalm, Actellic super PP or sofagrain at the rate of 50g per 100 kg or any other product authorised and as advised by the authorities to avoid insect infestation. Sprinkle insecticide in the advised amount on each layer homogeneously.
- In addition, avoid putting other cereals in the granary that contains maize cobs.
- Note that storage of cobs in this type of granary is pre-storage and should not stay too long (maximum 2 months).

## Monitoring the maize cobs stock

In order to guarantee a good quality stock, it is very important to monitor stored maize during the storage period. It is therefore necessary to:

- Inspect the stock status at least once every 15 days and ensure that weevils are not present. If yes, destock and dry again.
- Avoid storing newly harvested maize on an old stock in the granary.
- Avoid placing other wooden objects like hoes next to the granary.
- Clean (rake, sweep and burn leaves) regularly around the granary.
- If the storage phase of cobs lasts longer than three months, it is useful to carry out a maintenance treatment. This maintenance treatment simply consists of sprinkling one or two sachets of insecticide on the external surface of the stock.
- Avoid tying ropes on the granary for drying clothes as this increases chances of contact between the granary and insects, rats and other animals.