

Rice Storage

Introduction

- Safe storage of rice for longer period is possible if three conditions are met:
- Grain is maintained at moisture content of $\leq 14\%$.
- Grain is protected from insects, rodents and birds.
- Grain is protected from re-wetting from rain or absorbing moisture from the surrounding air.
- Milled rice requires 20% less storage space than paddy.

Storage systems

- Milled rice should be stored in metal silos or hermetic bags and stored well on pallets in clean and well-ventilated stores.

(a) Metal silos

- Pest proof.
- Hermetic (moisture proof).
- Chemical-free crop storage.
- Stores rice for over 12 months.

(b) Hermetic bags

- Hermetic.
- Chemical free crop storage.



Fig 1. Metal silo

Source: Lusike Wasilwa



Fig 3. Hermetic storage bag

Source: Lusike Wasilwa



Fig 4. Rice ready for storage

Source: Lusike Wasilwa

- Needs to be complemented with rodent proof storage structures.
- Stores rice for over 12 months.

Common rice storage pests

- Pests can cause loss of up to 100% of the milled rice.
- The most common pests for stored rice in Kenya are weevils, lesser grain borer and moths.
- Storage pests can cause loss of up to 100% of the milled rice.

Basic requirements for good rice storage

1. **Ensure rice going into the store is in good condition**
 - Head rice is less likely to suffer from insect attack than broken rice.
2. **Keep the store in good condition**
 - Stores should be theft-proof.
 - Stores should be sited in areas not prone to flooding, and should allow water to drain off easily.

Stores should protect the grain from moisture, pests and temperature fluctuations.

3. Practice good store hygiene

- Store surrounding should be kept clean.
- Old grain should be stored separately from new crop and should be utilised first.

4. Maintain the condition of the grain and store throughout the storage season

- Inspect the store and the produce regularly to check for pests and mould growth.
- Moisture content: should be $\leq 14\%$.