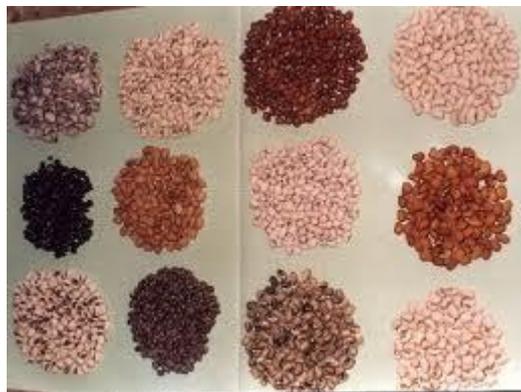




**NIGERIAN STORED PRODUCTS RESEARCH INSTITUTE (NSPRI)
GUIDE ON THE POST HARVEST HANDLING OF COWPEA**



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**Increasing Nigeria's Agricultural Self-reliance through adequate post-harvest
loss prevention.**

GUIDE ON THE POST HARVEST HANDLING OF COWPEA

Introduction

Cowpeas are good sources of plant protein. Different varieties of cowpea (either white or brown) are produced all over Nigeria. The major problem of storage of cowpeas is insect infestation and damaged. Cowpeas are readily attacked by the bean weevil during storage. The weevil can cause total loss within a few months. Infestation starts from the field to the store that provides favorable conditions for the rapid multiplication of the insects.

Signs and Causes of Spoilage

1. Presence of Holes.
2. Change in colour degradation of the grains.
3. Bad smell.
4. Caking of grains.
5. Presence of powder or dust.

All these are caused by:

1. Attack by bean weevils.
2. Use of already infected storage container or store.
3. Wet conditions due to accidental wetting or rodent urine.
4. Inadequate or uneven drying leading to fungal attack.

Recommendations for Harvesting and Handling

1. Pick the mature pods when the colour changes from green to brown.
2. Dry pods well before shelling.
3. Thresh using cowpea thresher or traditional threshing methods.
4. Winnow the grains to remove unwanted materials.
5. Dry the grains by sun-drying or the use of mechanical dryers to a safe moisture content of 10 – 13% that can be assessed by mixing the cowpea with dry common salt in a tumbler. Dry cowpea will not allow the salt to stick to the side of the tumbler after shaking for 1 minute.
6. Apply Phosphine gas as fumigant in air-tight containers or polythene lined jute bag at the rate of one tablet per 100 kg bag or 10 tablets per tone of cowpeas.
7. You can also disinfect cowpeas by exposing it to sunshine, especially where there is abundance, for four days before packaging in an air-tight container.
8. Dried powder of orange peel can be admixed with cowpeas before storage in air-tight container.
9. Air-tightness can be provided in sealed polythene bags, plastic bottles with tight fitting lids and metal drum with tight fitting lids



10. Apply long lasting insecticide to prevent future insect damage. Examples are Coopx and Actellic. Follow direction on the container.

Note: Under no circumstances should chemicals not recommended for food storage get in contact with cowpea (e.g”otapiapia”, DDT, etc)

Storage Structures

Shelled cowpeas are good for storage in the following structures.

1. Airtight containers

Examples of airtight containers are drums with screw clamps (metal or Plastic) tin with tight lids as well as polythene bags and polythene lined jute bags.



2. Grain Store

1. Grain stores are suitable for the storage of cowpeas in bags if the stores are certified fit for storage by trained personnel and well maintained. They should be airtight as much as possible.

2. Grain stores should be protected from rodent entry by tight fitting metal doors. Arrange bagged cowpeas neatly

on wooden pallets in stacks leaving a space of one step (1 meter) between stacks. Also between stacks and roof.

3. Regular fumigation with the assistance of trained personnel is required.

4. Remove grains from the store on first come first leave basis.

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