



Kenya Cereal Enhancement Programme - Climate Resilient Agricultural Livelihoods Window Plus (KCEP-CRAL Plus)

SIMPLE SEED POTATO STORAGE STRUCTURE



Introduction

Seed potato storage is key to the successful establishment of a viable and sustainable potato production. One of the seed storage structures is the diffused light store (DLS)

Utilizing DLS for potato seed storage enables seed tubers to germinate and produce at least 3 robust sprouts. It also ensures that seeds are in good condition, ready for planting once the rains fall.



Diffused Light Store (DLS) made from local materials



Seed potato stored in a diffused light store (DLS).

Diffused Light Store (DLS)

This is an improved seed storage structure that is not only cost-effective but also constructed using locally sourced materials. This structure allows for reduced or diffused light to penetrate, thereby promoting the growth of robust sprouts from seed potatoes.



Inside the DLS



Well sprouted seed potato tubers



Over sprouted seed potato tubers

Materials for building a DLS

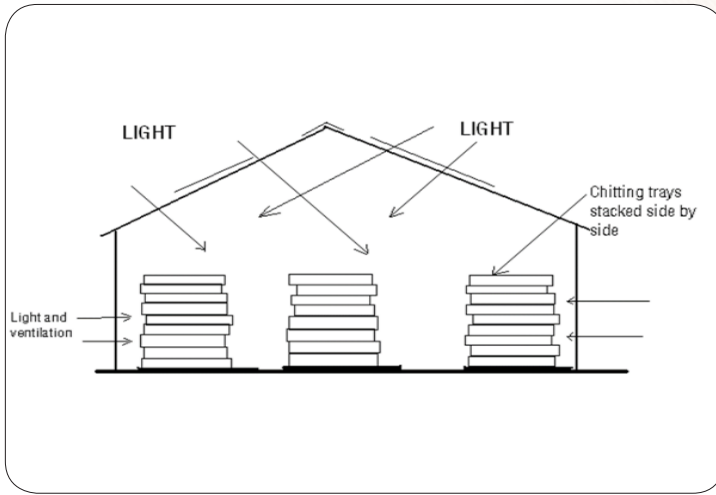
Materials	Quantity
Off-cuts (8x4" 6fts)	64
Timber (3x2" 10ft)x 6pcs	60
Timber (3x2" 6ft) x 6pcs	36
Timber(2x2" 6ft) x 3pcs	18
Nails (10Kgs) assorted 3" and 4"	10
Floor (2 bags of cement)	2
Floor (6 Wheelbarrows sands)	6
Floor (6 Wheelbarrows ballast)	6
Corner posts	4
Labour for 3 days Technician	3
Labour for 3 days to aid Technician	3
Iron sheet 2.5 metres	3
1 Transparent sheet	1
Roofing nails (Kg)	1
Transport	1
Aphid proof netting (8 x 4 x 6fts)	14.4
<p>Note: The materials listed above are for construction of a DLS store with no shelves or crates, which are still needed for orderly storage of seed potato</p>	



Advantages of using a DLS

- It guarantees the prompt availability of high-quality, sprouted seed potato tubers
- Properly sprouted seed tubers are essential for ensuring uniform germination in a potato crop. This crucial step sets the foundation for a successful harvest by promoting consistent growth and development throughout the field. By carefully selecting and preparing seed tubers, farmers can optimize their yields and produce high-quality potatoes.

Model Structure



How to construct a Store for 200 bags of 50kg

- To begin, measure the dimensions of the store, which are 8 meters in length and 4 meters in width. Next, securely place the four sturdy corner poles in their designated locations.
- Utilize timber or offcuts to construct the walls, positioning them 10 cm apart to maximize natural light penetration.
- Install a roof made of iron sheets, with the addition of one transparent sheet to allow diffused light to enter the store.
- The floor can be cemented or compacted to ensure it is level and easy to use and maintain.
- To optimize air circulation and facilitate cleaning within the store,




it is recommended to elevate the shelves approximately 0.5 meters above the ground. Alternatively, crates can be stacked on a raised platform that is 30 centimeters high. This will not only enhance the overall cleanliness of the store but also improve the aesthetic appeal and accessibility of the products on display.

- To prevent pests from spreading diseases to your seeds, it is recommended to install a 50-micron aphid-proof net around the inside of the store. This net will serve as a barrier to keep aphids at bay and protect your seeds from potential harm.

Rules guiding seed potato storage

- Clean and disinfect the seed store at the beginning of each season before storing new seed stock. This prevents the spread of diseases and pests from one seed stock to the next.
- Avoid storing seed tubers in gunny bags, as they restrict airflow and can lead to tuber spoilage.
- Sort through the tubers and discard any that are bruised or rotten..
- Store tubers of each variety separately in crates or on the shelves.
- Please store only potato tubers intended for use as seed
- Please avoid stacking the tubers more than two layers high in either the crates or on the shelves. However, you may stack the crates on top of each other for efficient storage.
- When sprouts begin to form, it is important to spray them with



insecticides to protect against pests such as aphids and potato tuber moth. These pests can cause significant damage to your plants, so it is crucial to take preventative measures to ensure a healthy crop.

Seed potato in boxes

Utilize 1 square meter boxes constructed from wooden planks with a 10mm spacing between them.

- To optimize air circulation, position the boxes at a height of 25 to 30 cm above the ground.
- It is important to regularly inspect the sprouting of potato tubers, ideally on a weekly basis. If a tuber has only one sprout, it is recommended to remove the sprout in order to encourage the growth of multiple sprouts. This will ultimately lead to a healthier and more productive potato plant.



Stack of Crates



REPUBLIC OF KENYA



National Agricultural Value Chain Development Project
Transitioning from Subsistence to Commercial Farming

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