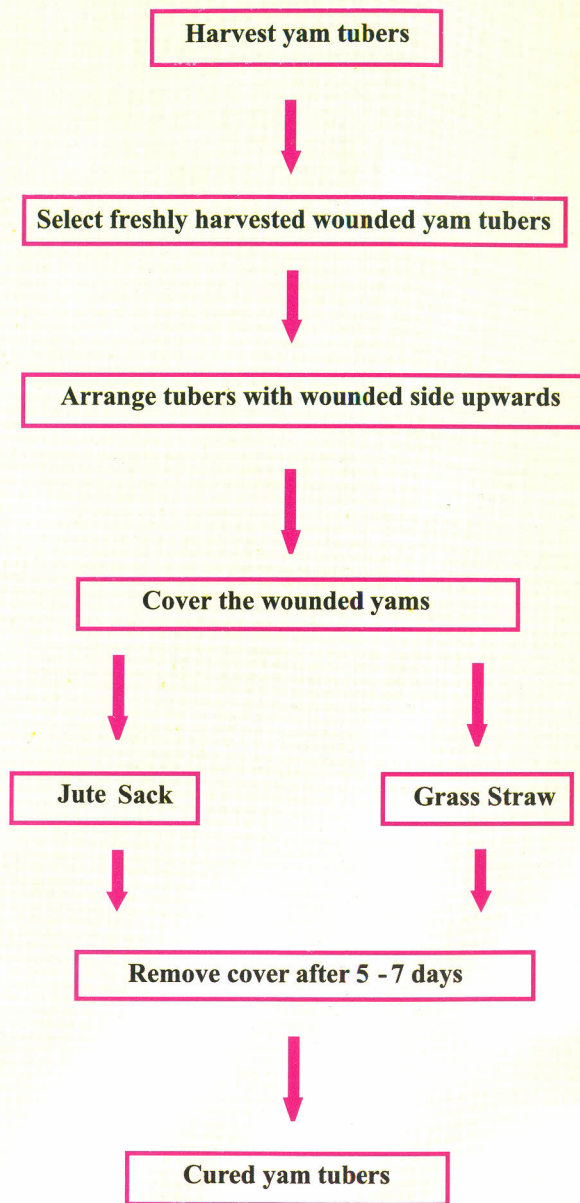


Yam Curing Flow Chart

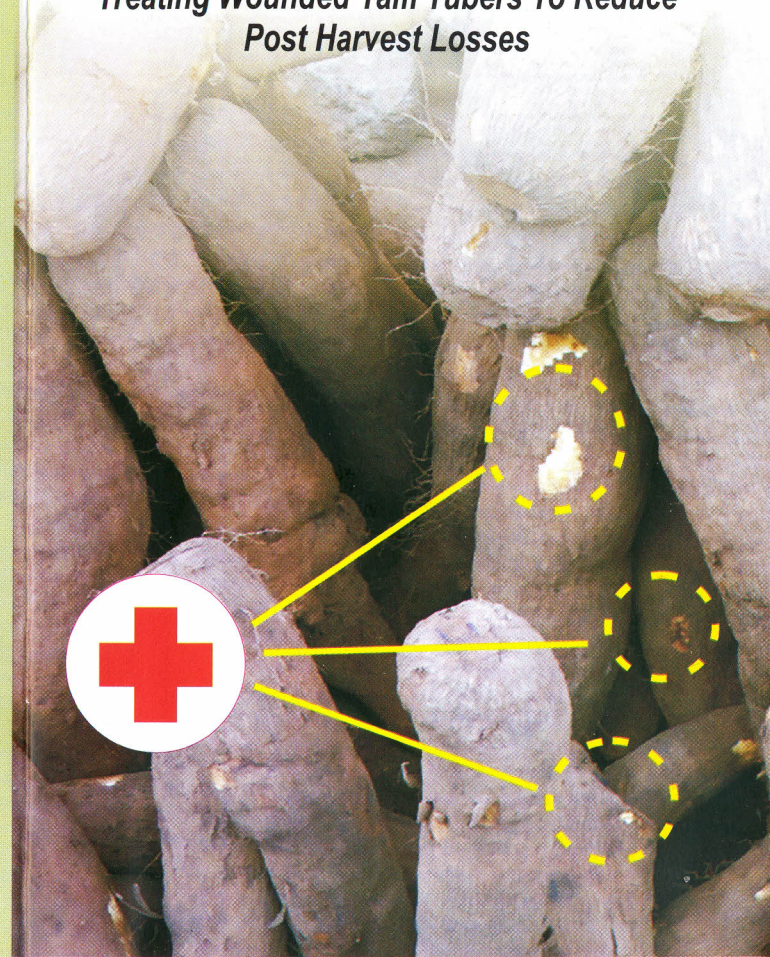


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Sponsorship:
GRATITUDE PROJECT

YAM CURING

Treating Wounded Yam Tubers To Reduce Post Harvest Losses



CSIR-FRI



Co-funded by the European Union



GRATITUDE, an EU funded project in collaboration with CSIR-Food Research Institute (FRI) and NRI of University of Greenwich focuses on gains from losses of roots and tubers along the value chain.

Yam Curing

In most tropical countries yam (*Dioscorea spp.*) is wide spread and is one of the major staple foods as it is an important source of carbohydrate for many people. Approximately, 50% of the daily carbohydrate intakes of West Africans are derived from the consumption of yams.

When yams are being harvested, some tubers are wounded in the form of cuts, bruises and abrasions caused harvesting implements. These openings provide points of entry to wound pathogens to attack the yam. Often, wounded yams respond to the wounds by forming suberin beneath the expose cells, followed by the formation of periderm (cork) of thickened cells.

Wound Repair Process

The process of wound repair is made up of

1. migration of starch cells to the injured surface within 5-10 hours of injury,
2. formation of a suberized layer beneath the cut surface after 2-3 days and
3. production of periderm (cork) after approximately 5 days.

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This acts as a protective barrier against wound pathogens. As these structural changes are occurring there is increased rate of respiration, hydrolysis of starch to sugars and an increase in invertase activity and this high rate of metabolic activity is maintained until healing is complete.

Unfortunately, wound healing processes do not occur when tubers are injured by surface abrasions or severe bruising or superficial cuts resulting in high respiratory activity and weight loss until decay. As such roots are not healed and so these are exposed to prolong loss of moisture and have an increased susceptibility to wound pathogens that enter and causes rot.

Yam Curing Procedure

Step 1: Harvest - Harvest yam tubers

Step 2: Yam tubers- Select freshly harvested wounded yam tubers

Step 3: Arrange - Arrange the wounded tubers in a circular, rectangular or pyramid form with the wounded side facing upwards

Step 4: Cover
Cover the wounded tubers with jute sack or grass straw for 5 - 7 days.

Step 5: Remove cover
Remove the cover after curing

Step 6: Cured yam
Cured yams ready for storage or sales

Figure 1: Curing of Freshly Harvested Yams



A. Freshly harvested yams

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C. Curing yam under grass straw



B. Curing yam under jute sack

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