

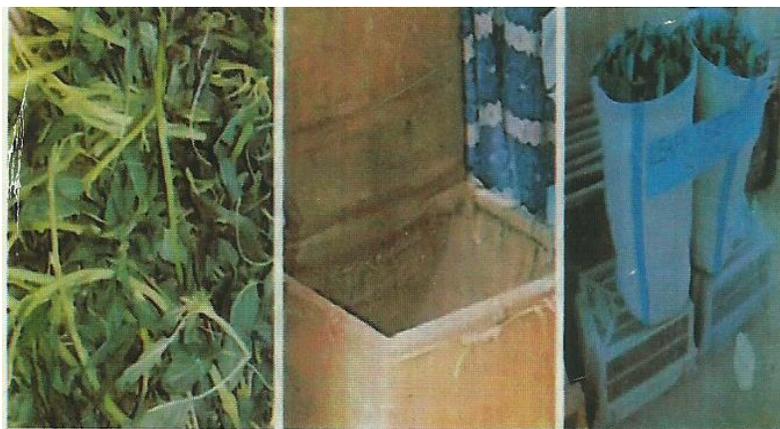


NSPRI

Research In Food Preservation to Reduce Poverty

PRACTICAL GUIDE

POST HARVEST HANDLING OF LEAF VEGETABLES



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Introduction

Leaf vegetables include Amaranthus (green), Bitter leaf, African spinach, Telferia (Ugu), water leaf etc. They are consumed in forms but are highly perishable. Vegetables provide essential nutrients in our diet. They are good sources of vitamins that protect our body from diseases and infections

Vegetables also provide our body with minerals that essential for the formation of blood, enzymes, good teeth and strong bones. The green part of vegetable provides antioxidants to the body. They can be produced anytime of the year especially along the river banks hence they are rapid ways of reducing poverty of farmers. Post harvest preservation measures must be taken within minutes of harvest to avoid serious deterioration and even total loss of the leaf vegetables. Vegetables can also be dried.

Unwholesome Vegetables

Signs of Spoilage	Causes of Spoilage	Possible uses
Rotting	<ul style="list-style-type: none">• Microbial attack• Heaping of vegetable in the direct sun• Mixing rotten vegetables with wholesome vegetable	To feed animals
Wilting	<ul style="list-style-type: none">• Heaping vegetable in the sun unprotected	Can be dried for human consumption.
Colour Degradation	<ul style="list-style-type: none">• Aging of the vegetable.• Loss of moisture due to Poor handling.• Over maturity before harvesting.	Can be fed to animals

Materials Needed in Post harvest handling of vegetables

- To benefit from vegetable, the stage of maturity at which harvesting must be made, must be known to the handler.
- Usually vegetable must be harvested when it is still succulent and fresh, when it is not fully matured.

- The follow materials are needed in vegetable handling.
 - ✓ For harvesting use stain steel knives.
 - ✓ Transport from the farm wrapped in polythene sheets leaving both ends open.
 - ✓ Transport to market with vegetable baskets. Keep leaf vegetable fresh by bunching.
 - ✓ For long periods use, you can dry the vegetable, package in polythene bags and store in dark container.
 - ✓ Some vegetable e.g Ugwu can be blanched and stored after packaging in polybags in the freezer of refrigerator.



Don't sprinkle vegetable kept in the vegetable basket with water.

To prolong the usefulness of the bunching method air the vegetable daily by removing the polythene sheet and recover.



Improve Vegetable basket

Vegetable Basket

- Vegetable baskets provide moist and Cool environment to prolong the shelf - l i f e of f r e s h vegetables.
- It is a basket with lid and lined both Inside and outside with wettable jute material.
- The basket can be constructed with "cane" material but well ventilated.
- The improved basket is constructed with plastic perforated basket to provide ventilation.

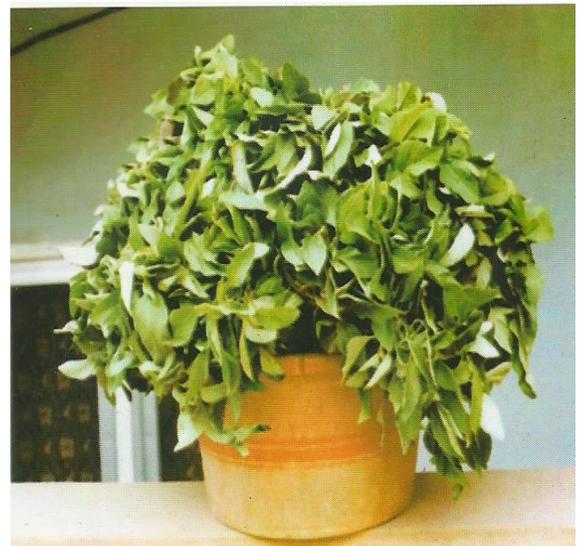
Usage of Vegetable Basket

To use the vegetable basket:

- Harvest vegetable at appropriate stage of maturity.
- Harvest during the cool part of the day.
- Do not heap vegetable in the sun. Cut off the roots.
- Wet basket with potable water.
- Load the basket with the vegetable and close the basket.

Vegetable Bunching

- The method of bunching vegetable is to keep it fresh in the ambient temperature.
- You require a bucket, and polythene sheet that can cover a bunch of vegetable.
- Cut off roots of the vegetable and bunch into a size that the cut end will be able to go into bucket.
- Put potable water in the bucket.
- Dip the cut end of the bunched vegetable in the bucket containing potable water with the leaves outside the bucket.
- Cover the leaves with polyethylene sheet and the around the neck of the bucket.
- Open the sheet daily and replace water.
- Keep bunched vegetable under the sheet.
- Leaf vegetable properly bunched should remain fresh for 5 days



Storage of Leaf Vegetables under low temperature

- Vegetables can be stored in the freezer part of the refrigerator.
- To store under low temperature, follow the following instruction.
 - Cut the vegetable.
 - Parboil in hot water, cool and remove excess water.
 - Package parboiled vegetable inside airtight polythene bags or containers.
 - Remove air from the pack and seal.
 - Store packed vegetable in the freezer part of the refrigerator.

- Remove as needed. It can store for long time if the fridge is made functional always.

Processing Leaf Vegetable by Drying

- Vegetable to be dried must be freshly harvested as much as possible.
- Wash vegetable with potable water.
- Blanch vegetable in hot water for about 5 mins.
- Remove vegetable from water and squeeze out excess water.
- Spread on raised platform over polythene sheet for small scale drying.
- Use the multipurpose drying, hybrid dryer or the solar ten if you need to produce for commercial purposes. Remove the dried vegetable from the dryer and pack in polythene bags, seal after airing.
- Store in dark container to protect from direct sunlight.

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