



Good packaging practices essential for postharvest life

Article by Dr. Arnold M. Opiyo Senior Lecturer in Horticulture Dept. of Crops, Horticulture & Soils - Egerton University

Packaging of fresh produce is as old as the trade in these commodities. Packages are convenient containers for marketing and distribution of horticultural products, and they have many special requirements.

Packing Horticultural Produce for Market:

There are three important considerations when packing for market;

1. A satisfactory package for the product.
2. Honest packing – including uniform packing.
3. Careful placing of the products so that the specimens remain in position until they reach the market and present an attractive appearance.

Packaging can be made more protective by:

1. Individually wrapping each piece of produce.
2. Isolating each piece, as in the cell pack and the tray pack methods for fruits.
3. Using energy – absorbing, cushioning pads.

These techniques increase costs. In order to justify their use, there has to be reduced wastage, or increased selling price; if not both.

Types of Packaging:

- 1. Baskets** – exist of various sizes, and made of a range of materials; including cane baskets, Reed baskets, Bamboo splits baskets, split canes (for mangoes); Coconut leaves baskets. Baskets are usually round in shape. They are cheap, light, durable, and easy to handle. Most have the disadvantage of flexibility. They lose shape easily;

contents come under pressure and get damaged. The smaller the basket the better. They are difficult to clean; therefore reuse may cause infection of produce. Because they are round, they waste more space than rectangular containers.

- 2. Boxes** – are normally made of light material wood. They are rigid



and rectangular. Designs cater for ventilation apertures to minimize heating of produce. They are of two types – (i). Shallow with open top (trays), (ii). Deep - very open construction (crates). For handling convenience, a box (case) should not exceed 30kgs. Boxes should be strong, easily washable/ cleaned to avoid contamination during reuse. Should have smooth surface (esp. internal).

3. Paper Board

Cartons – are now more commonly used than wooden containers. They are used for packing fruit, vegetables and

flowers.

Advantages:

- a). Internal surface is smooth (less damage to contents) hence lining of containers may not be necessary.
- b). Adaptable to varying product characteristics (e.g. weight, size and shape of product) by using different paper boards and dividers.
- c). Attractive designs may be printed on the carton (enhances eye appeal and marketing).

Disadvantages:

- a). Less durable compared to wood (requires extra care

in handling).

- b). When produce is heavy, top boxes tend to squash the bottom boxes. Limitation in stacking.

Corrugated cardboard boxes

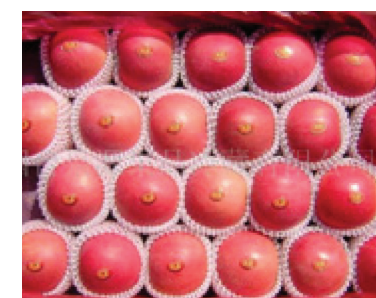
- if they are waxed, provide protection against moisture and humid environments;
- contribute to prevention of produce contamination;

Cartons must be strong enough to bear the weight of the produce, must either be waxed or should not absorb moisture easily and should

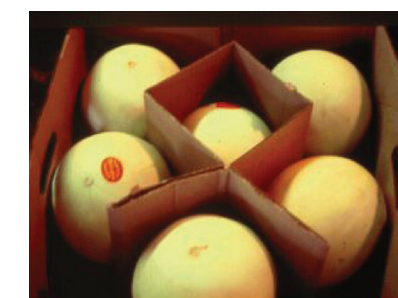
be adequately ventilated so as to allow horizontal and vertical airflow.

Each carton may contain fruit packaged in small units or secondary packaging units such as fruit wrappers, plastic bags, nettings or punnets. Nets offer the advantage of allowing the fruit to breathe freely. Punnets are generally made of polypropylene or polyethylene and are used for the packaging of small fruits such as plums and grapes.

.... To be continued in September-October Edition



Individually wrapped produce



Isolated by Separators



Cushioning of fruits