

## Harvest Maturity

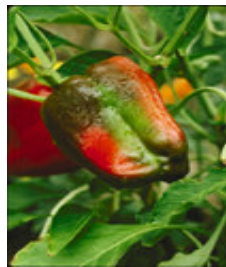
Peppers should be harvested based on a combination of different maturity measurements. The best measurements to use are time after transplanting, size and appearance.

Peppers are usually ready for harvest about 2 months after transplanting. The fruit should be fully developed and at or near its maximum size. The fruit should be firm to the touch. The fruit should have a thick wall, a shiny, waxy skin and a fresh green stem. The fruit should have an even colour, which depends on market preference.



## Harvest Methods

Grasp the fruit with the thumb and forefinger and press against the stem. Snap the fruit off the plant, being careful not to break or damage the fruiting branches. Peppers should be harvested once per week and picked in the cool hours of the day. Do not harvest when wet, as this will increase postharvest decay. Throw out injured or diseased fruit. Place the fruit directly into a field container. Never drop or throw the fruit and do not overstuff the fruit in the field container. Do not use picking containers with rough inner surfaces. Strong, well-ventilated plastic containers are ideal harvest containers. The containers should be cleaned and sanitized with a 200 ppm bleach solution before each day's harvest. Line straw baskets and wooden crates with newspaper to prevent fruit abrasion. Large canvas or nylon sacks should not be used as field containers. They provide little protection and the fruit deteriorates more rapidly due to heat build-up. Harvested peppers should be placed in the shade as soon as possible. Peppers exposed to full sun for several hours will begin to soften.



## Preparation for Market

### *Cleaning*

Small-scale operations can wipe the fruit with a soft cloth to remove dirt, sand, and surface stains. Larger producers should clean the fruit by dipping in a tank of clean water with 150 ppm. This is equal to 2 oz of household bleach (such as Marvex) per 5 gallons of water, or .3 liters of bleach per 100 liters of water. Check the chlorine level and pH of the wash water at least hourly using test papers or a meter. A water pH of 6.5 is desirable. Air-dry the fruit before packing.

### *Grading*

Sort fruit by size and according to shape, colour, appearance, and amount of surface defects. Fruit should be fresh, uniform in shape, and free from injury and decay. Fruit for the export market must be firm, well-shaped, and free from damage caused by scars, sunburn, disease, insects, or injury. Throw out badly misshapen, cracked, or wilted fruit.



### *Waxing*

Benefits of waxing include enhanced shine, reduced weight loss, and extended market life. A carnauba-based wax is recommended for peppers. The simplest ways to apply the wax is a manual rub or an overhead spray as the peppers are rotating on a bed of soft brushes.

### *Packing*

Pack only the highest quality peppers. Select for uniformity of colour, shape, and size. Do not pack damaged or decayed fruit. Do not pack fruit of different colours in the same carton. Send peppers to market as soon as possible after packing. Use strong well-ventilated containers. Use fiberboard cartons for export.

**Tip:** Waxing greatly improves the appearance and shelf life of peppers. For more details on waxing fruits and vegetable contact the New Guyana Marketing Corporation or the National Agricultural Research Institute.



Peppers packed and ready for transport

## Postharvest Temperature

Cool fruit immediately after harvest. Fruit will soon shrink and soften at ambient temperature. Optimum postharvest temperature is 7°C (45°F). Maximum market life is 3 weeks. High temperature causes shriveling. Peppers are vulnerable to chilling injury (CI) below 7°C (45°F).

## Relative Humidity

Optimum postharvest RH is 90% to 95%. Holding peppers at low RH results in more water loss. High RH keeps the fruit firm.

## Postharvest Diseases

Postharvest diseases generally usually occur where there is tissue damage, more often during rainy season and are worse at warm temperatures. The best prevention begins with pre-harvest disease control. Start with clean seed, plant in well-drained soil and follow good field sanitation practices. Remove infected crop debris and throw out diseased fruit. Make periodic fungicide applications. Carefully handle fruit during harvest. Pick fruit when dry and clean fruit surface with soft cloth. Use clean sanitary wash water (150 ppm bleach) and dry fruit surface before packing. Peppers should be held at 7°C (45°F) postharvest temperature.



### Chilling Injury

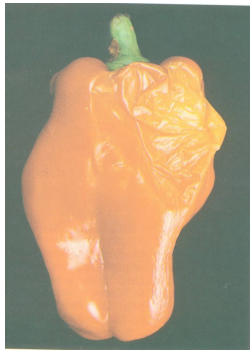
Chilling Injury occurs below 7°C (45°F). Symptoms include fruit softening, water-soaked spots, surface pitting, discolouration of seed cavity, and increased susceptibility to decay. Injury increases the longer the fruit is exposure and the lower the temperature. Signs of damage usually appear after peppers are returned to average or room temperature.

### Gray Mould

Gray mould begin as small cream-coloured specks on wounded areas. And grows into round water-soaked spots covered with a gray mould.



*Bacterial Soft Rot (below left)* Symptoms of soft rot are water-soaked areas of tissue around the edge of wounds. Tissue softens and fruits turn into a mushy watery mass. There is a foul smelling odour and decay can spread to all fruit in the container.



*Rhizopus Rot (above right)* infects the entire fruit. Small water-soaked spots, quickly enlarge. Signs are grayish-white masses of mould that eventually turning black. Clear liquid is released and nests of mould form within the carton of fruit.



### Watery Soft Rot

Watery soft rot causes spots to develop on fruit surface, which is soon enveloped in a white mould. Infected fruit tissue becomes

soft and watery. Decay spreads within carton to form nests of rotting fruit.

### Black Mould

Black Mould symptoms are small, circular, slightly sunken spots that grow into sunken holes, later covered with gray to black mould. Seeds and inner fruit walls become covered with mould.



### Anthracnose

Anthracnose easily spreads to ripe fruits. It begins with small, water-soaked lesions that grow and become sunken with a tan to black colour.



New Guyana Marketing Corporation

## PEPPERS

### Postharvest Care and Market Preparation Information Sheet



**Technical bulletins also available on Waxing Fruits and Vegetables. Contact:**

New Guyana Marketing Corporation (NGMC)  
87 Robb & Alexander Sts., Georgetown, Guyana  
Tel: 226-8255, 226-2219

National Agricultural Research Institute (NARI)  
Mon Repos, East Coast Demerara, Guyana, Tel: 220 2950



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*This information sheet provides growers and agriculture extension personnel with a summary of the recommended harvest and postharvest handling practices for peppers. A more technical and detailed bulletin is available from the New Guyana Marketing Corporation (NGMC) and the National Agricultural Research Institute (NARI).*