

Technical Bulletin #94:

Harvest and Postharvest Recommendations for Chili Pepper

1. Harvest

- Depending on the variety and market demand, green or red fruit, harvesting chilies begins 50 days after transplanting for green, immature, chili. If the market prefers the chili fruit ripe, harvesting will begin 70 to 80 days after transplanting. Harvest time depends on how well the farmer manages the crop and can last up to 100 days, but is usually between 50 to 60 days.
- Good quality fruit should be uniform in shape, size, and color typical of the variety.
- If you are harvesting green fruit, you should harvest every 2 to 3 days. Ripe fruit should be harvested weekly, preferably during the early part of the day.
- Harvesting during or just after rain is not recommended because wet conditions favor disease development and enhance fruit breakdown.
- If chili must be harvested when the sun is up, the fruit should be placed under shade to dissipate heat before it is packed.
- Chili is picked by hand. The fruit is harvested by removing it from the branch and ensuring that the stem remains intact and attached to the fruit.
- During harvest, overripe soft fruit is also removed from the plant.
- Pickers should wear gloves to protect their hands because the oils in the fruit can cause severe burns. Pickers should take care to not to touch their face or eyes.
- Harvested fruits can be placed directly into plastic field crates or into smaller plastic buckets, which are then transferred to crates at the side of the field.
- The harvested fruit should be kept in shaded conditions and be protected from the sun, wind, and rain.



2. Cleaning and sorting

- Chili should be cleaned in the field and sorted by hand.
- Clean chili by gently rubbing the fruit to remove debris and soil particles.
- If washing has to be employed, the wash water must be clean or sanitized with chlorine. After washing, the fruit must be dried properly to prevent decay.
- Fruit with defects such as cracks, decay, mechanical damage, and sunburn should be sorted out and rejected. Undersized, shriveled, dull-looking, pitted, or softening fruit also should be discarded.

- Chili may be classified by color, such as red or green, and a mixture of red, green, and yellow, and placed together or separate parts of the same container. Each class can be assigned a particular name such as class or grade 1 or grade 2. Other quality specifications may include:
 - ✓ Chili is free from soil and debris
 - ✓ No overripe or softening fruit
 - ✓ Chili is free of microbial infections or insect infestations
 - ✓ Fruit has no mechanical damage, splitting, or cracking
 - ✓ Stems are intact and green
- Washing in 300 ppm (30g/L) chlorine solution or sodium hypochlorite also can reduce disease and should be followed by proper drying.
- Another safe and simple treatment is to dip the chili fruit in hot water. Dipping chili in 53 to 55°C water for 4 minutes can effectively control botrytis rot without causing fruit injury.

3. Packing for transport

- The packaging material used for transportation should have air holes for good ventilation. Alternatively, a sack made of netting can be used.
- Storage facilities must be dry and cool, with good ventilation.
- Different kinds of packaging containers are used for chili sold to domestic markets, including bamboo baskets, wooden crates, plastic crates, and plastic bags.
- Plastic crates offer better protection against physical injuries than the other containers due to their smooth surface, rigidity, and ease in handling.
- The fully loaded container should be taken to a shaded, well-ventilated temporary holding area.
- Avoid overloading which can cause bruising or damage by compression.



4. Transport to the market

- If bamboo baskets or wooden crates are used, protective measures must be applied. The use of liners, such as fresh leaves, old newspaper or cushions, and proper strapping or binding of the container is recommended.
- Baskets of produce should not be stacked on top of one another unless a rigid divider is provided in-between layers in a stack.
- Plastic or mesh bags and sacks are not recommended unless they are placed in a rigid container.
- Chili is susceptible to mechanical damage, particularly if it is transported in sacks or bags. Any cracks, splits, or punctures will cause the fruit to deteriorate rapidly. Discoloration, decay, and tissue breakdown are the common symptoms of damage.
- The vehicle used for transportation should be refrigerated or at least have a roof to protect the produce from direct sunlight and shade the loaded baskets.



5. Storage

- Keep the harvested chili in a cool and dry place under the house or shaded well-ventilated areas.
- Where no cold storage facilities are available, fruit should be sorted, packed, and marketed within 24 hours of harvest. This is particularly important for varieties that exhibit short shelf life.
- When stored above 13°C, chili is subject to accelerated ripening and bacterial soft rot infection.
- If cold storage facilities are available, Chili can be stored at 10°C with relative humidity 85-95%. The fruit can last for 2 to 3 weeks.
- Chili can be damaged when stored below 10°C. Symptoms include surface pitting, water soaked areas, decay and discoloration of the seed cavity. Symptoms can appear after a few days at 0°C or a few weeks at 5°C.

6. Nutrition value

Chili, both fresh and dried, is widely used in Cambodian cooking, and is a very healthy food. A small portion of fresh chili, 28g, provides two-thirds of the daily requirement for Vitamin C, helping your body fight infection and build strong bones. When chili is sun-dried, the benefits of Vitamin C are reduced, but the benefits of Vitamin A are greatly increased. The same 28g portion of dried chili provides 1.5 times the daily requirement of Vitamin A, another nutrient that protects your body and, in particular, your eyesight. Chili is a good source of iron, a mineral that fights anemia. The Vitamin C in chili helps your body absorb iron from other foods.

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