

Tomato

Post Harvest Technology

Grading

During grading of fruits, damaged, rotten and cracked fruits should be removed. Only healthy, attractive, clean and bright fruits should be selected. The grades are mostly based on the condition and the quality of the fruits and not specifically on their size. However, on the basis of the size of the fruits three grades are formed: small (<100 g), medium (100-255 g) and large (> 255 g). Retailers normally do size grading for the local market. Internal urban markets, have differential prices for size grades as against ungraded fruit. Bureau of Indian Standards has specified 4 grades viz., Super A, Super, Fancy and Commercial for tomato crop.

Packaging

For local markets, the fruits are packed in bamboo baskets or plastic crates. Plastic crates can be conveniently stacked one on the other and a contoured rim keeps the product safe and natural and allows sufficient air circulation. The packing should ensure careful handling i.e. rigid enough to protect the fruits from being crushed.

For exports, the fruits are packed in cardboard telescopic boxes with capacities of not more than 15 kg, should be used. Size graded tomatoes are pattern packed in layers to make best use of the box.

Storage

The main objective in storage after harvest is to control the rate of ripening to extend the marketing period. As the tomatoes are chilling sensitive, the recommended storage temperatures differ depending on the fruit maturity. A storage temperature of 13 °C with 90-95% relative humidity is recommended for slow ripening. At this temperature, most varieties keep in good condition for 2-3 weeks and change colour very slowly. In cold storage, unripe tomatoes can be stored for 4 weeks at a temperature of 8-10°C with 85-90 % relative humidity. Fully ripe fruits are stored at 7 °C with 90% relative humidity for 1 week.

Transport

Tomatoes are highly perishable in nature hence quick means of transportation is necessary. Tomatoes are transported by road through tractors, trucks and also by rail and air to distant markets. Village produce is transported to the near by towns and city market only by road.

Cool Chain:

Cool chain is essential during the transport of export quality commodity all the way from the farm to the customer. This helps in maintaining the temperature inside the box at the same low level as in the cold storage.

The various stages of the cool chain are:

1. Coldstore at the farm.
2. Refrigerated truck from farm to the airport
3. Coldstore at the airport.
4. Building up of the pallet in a coldstore at the airport.
5. Loading the aircrafts directly from the coldstore in a short time.
6. Cargo aircraft maintains coldstore temperature in hold.
7. Off loading direct into a coldstore in the receiving country.
8. Refrigerated truck to the customers.