

Apple

Post Harvest Technology

After the harvest, all the fruits are washed to remove the latex, sooty mould and surface debris. Fruits free from defects should be sorted out and the remaining fruits are graded according to their colour and size.

Packaging :

Normally the apples are packed in carton with lids. Where staples are used care should be taken to ensure complete staple closure to avoid fruit damage. Corrugated trays are equally effective as packaging material while transporting the fruits. Use of such trays is cost effective due to its reusability.

Storage :

Apples grown in the upper belts of Jammu and Kashmir can be stored for 90 days under ambient conditions whereas in lower belts they are stored for 60 days.

Most apples maintain their quality when stored at 1.8 to 0°C with 90-95% relative humidity. However some varieties are cold sensitive at this temperature and therefore have to be stored at 3.3-4.4°C. Fruit to be stored longer than 1 month benefit from controlled atmosphere (CA) storage in terms of retention of acidity and firmness and reduction of scald incidence. Recommended atmosphere is 1-2% O₂ + 2-4% CO₂ however specialist should be consulted for concentration of CO₂ and O₂ as the recommended gas mixtures varies with the variety and the geographical area in which the variety is grown.

Apples can be stored with other temperate fruits if they have the same temperature requirements. Vegetables like cabbage and onions should not be stored with apples as apples absorb their odour. Similarly fruits and vegetables sensitive to ethylene at 0°C should not be stored with apples.

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.