

## Post-Harvest Management Protocols

# RADISH

Radish (*Raphanus sativus* L.) is a cross-pollinated, cool-season and annual or biennial vegetable crop. Radish is a popular vegetable both in tropical as well as temperate regions. Being a quick growing crop, it can be easily planted as an intercrop. It is a quick growing annual or biennial herb. It has different colours ranging from white to red. West Bengal, Bihar, Uttar Pradesh, Karnataka, Punjab, and Assam are major radish growing states. Radish is good source of vitamin B6, Calcium, copper, Magnesium, and riboflavin. It is also rich in ascorbic acid, folic acid, and potassium.



### The main Radish varieties cultivated in India:

- Pusa Desi
- Pusa Himani
- Pusa Chetki
- Pusa Reshmi
- Arka Nishant
- Japanese White
- Punjab Safed
- Kalyani White
- Chinese Pink
- IHR-I-I

## MATURITY INDICES

Carrot becomes ready for harvesting within 100 to 120 days from sowing, depending on variety. While harvesting the roots, the desired size is the primary consideration depending on the variety. Generally small to medium sized carrots are preferred. Oversized roots and yellow colouration are not acceptable. At marketable stage carrots should have at least 2.5 to 4 cm diameter at the upper end. Freshness of the leaves looking at its appearance is an indicator of quality.

## POST-HARVEST HANDLING

### GRADING

Harvested roots are washed and graded according to size and tied into bunches along with the tops. The radish should ideally, be of uniform and similar shape for the variety, well formed, smooth, firm but of tender texture. It should also be free from harvest damage, decay, disease,

or insects. Bunched radish tops should be fresh in appearance and turgid. Fresh, white in colour, uniform, well formed, smooth, firm and tender radish with 120 mm to 200 mm in length and 35 mm to 50 mm in diameter is usually considered to be of good quality.

## PACKAGING

Normally the produce is sent to the market loose or sometimes it is packed in gunny bags.

## STORAGE

After harvesting, the roots are properly washed, graded, and tied in bundles. They can be put in wooden baskets and sent to markets early in the morning. Radish roots cannot be stored for more than 2 -3 days under ambient temperature. However, they can be stored for about two months in, cold storage at 0°C temperature with 90 -95% relative humidity.



## Storage Parameters

Optimum carrying Temperature  
(in degree Celcius)

**0°C**



Optimum Humidity (in %)

**90-95**



Storage Life

**2 to 3 Weeks**



Highest freezing point	<b>-0,7°C</b>
Acceptable product temp. at loading into containers	<b>Max. 2°C above carrying temperature</b>
Ventilation setting for containers	<b>0 m<sup>3</sup>/hr</b>
Climacteric / non-climacteric	<b>Non-climacteric</b>
Ethylene production	<b>Low</b>
Ethylene sensitivity	<b>None</b>
Modified / controlled atmosphere	<b>1%-2% O<sub>2</sub>; 2%-3% CO<sub>2</sub></b>
Potential benefits	<b>Slight</b>