AGRIBLOSSOM
ISSN-2582-8258
A monthly peer reviewed e-magazine for Agriculture & allied Sciences

Earn more income from year-round production of radish

Lav Kumar[1], D.P Mishra[1], Nitu Kumari[2], Dharamraj kumar[1] and Anjali Rani[3]
[1]Department of Vegetable Science, Acharya Narendra Dev University of Agriculture and technology, Kumarganj, Ayodhya (U.P)
[2]Department of Vegetable Science, Veer Kunwar Singh College of Agriculture, Dumaroan, Buxar (Bihar)
[3]Department of Genetics and Plant breeding, Sardar Vallabhbhai Patel University of Agriculture and technology, Meerut (U.P)

Introduction

The radish (*Raphanus sativus*) is an edible root (fusiform) vegetable of the family Brassicaceae. Radish develop from primary roots and hypocotyls. Radishes are grown and consumed throughout the world, being mostly eaten raw as a crunchy salad vegetable with pungent flavour. Radish is grown widely in India, Egypt, Japan, Europe, and China. Pungency of radish due to isothiocyanates and red skin colour of radish due to Anthocyanin pigment. Radish used as a vegetable, salad, and pickles. Major sugar present in radish is a glucose. It is a rich in antioxidant (Vitamin C) and minerals like Ca, and K. Together, these nutrients help low high blood pressure and reduce your risks for heart disease. The radish is also a good source of natural nitrates that improve blood flow. Now days Its roots are used in treating urinary complaints and piles.

Varieties

Asiatic varieties (Tropical type): It is more pungent, long duration (45-55 days), large sized roots, high yield (250-300q/ha). These varieties do not require chilling temperature for bolting.

1) Arka Nishant: It is multiple disease resistance variety i.e white rust, pithiness, premature bolting, and forking.
2) Pusa chetki: It is suitable for growing in hotter months. These variety pure white in colour and less pungent i.e sweet in taste.
3) Pusa desi: It is an early variety. Its sowing time mid-August to mid-October and harvesting time in last week of September to early January.

European varieties (Temperate type): It is a short duration (25-30 days) produce good quality roots with less pungent, small size, low yield (75-100q/ha). Requires chilling temperature for bolting. Seeds are not produced under North Indian plains.

1) Pusa Himani: Only this variety which can be grown throughout the years. It is late type variety.
2) Rapid Red white Tipped: It is globular in shape.

Hybrids:

1) Pusa Himani = Radish black × Japanese white
2) Pusa Rasmi= Green type × Green type

Soil: Soil is important for radish root crop, usually radish prefer fertile, well-drained, sandy soils with good organic matter.

Climate: Radish grows well in cooler climates but required good sunlight. Temperature required for better root development is 10-15°C. Radish cultivated in both tropical and temperate climates.

Seed treatment: It has been found that socking radish seeds in naphthalene acetic acid (NAA) at 10-20 ppm before sowing is effective in stimulating germination of radish seed.

Prepration of field: Radish grown in any type of well drained and loose soil. Till the soil depth of 6-8 inches to make it loose and more suitable for growing radish. Add a layer of FYM with organic matter. soils with a pH range of 6-7.5 more suitable for radish cultivation.

Seed rate: 8-10kg /ha

Spacing: 15× 10 cm

Nutrient management: Mixture of several important nutrients N:P: K are properly required for radish cultivation. At a time of pre-maturation stage of roots N:P: K ratio 20:10:5 (kg/acre) apply.

Irrigation: Irrigation once every 3 days may require a favourable soil moisture and oxygen conditions in the root zone through the growth period.

Harvesting: Radish will be ready to harvest quite rapidly as soon as three weeks after planting for some varieties. When roots are approximately 1 inch in diameter at the soil surface. Pull one out and test it before harvesting the rest.

Yield: 20-30t/ha

Physiological disorders:

1) Akashin: Induced by high day and high night temperature 30°c and 20°C, as well as by low soil moisture. It is caused by Boron deficiency in which root growth is checked. It is controlled by sowing of genetically pure seeds and use of resistance variety from this disorder.
2) Pithiness: It is occurring more in summer crop than spring or autumn. It is caused by high temperature three weeks before harvest and excess application of N, P, K causes pithiness. It is controlled by resistance variety used and also by properly irrigation

Diseases:

1) White rust: It is caused by *Albugo candida*. It is controlled by chemically use of fungicide i.e mancozeb 0.25% or 2500g in 1000 litre of water (for per hectare). It is also controlled from rust resistance variety.
2) Phyllody: Seed disease of radish, it is caused by MLO. It is controlled by use of resistance variety.