

## Capsicum Cultivation under Protected Condition

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### Introduction

Capsicum, additionally referred to as candy pepper, bell pepper or Shimla Mirch is one of the famous veggies grown in the course of India. It is wealthy in Vitamin A (8493 IU), Vitamin C (283 mg) and minerals like Calcium (13.4 mg), Magnesium (14.9 mg) Phosphorus (28.3 mg) Potassium, (263.7 mg) in step with a 100 g clean weight. Capsicum is a cool season crop. Sweet pepper does not anymore include capsaicin so the group has turned out to be an essential green vegetable crop globally.



**Soil**

Soil should be good organic manure and no water logging. It can be cultivated in a wide range of soils but sandy loam with a pH of 5.5 – 6.8 is ideal. Water stagnation is detrimental to the crop. High acid soils need to be reclaimed using dolomite or limestone.

**Climate**

Capsicum prefers moderately low temperatures and dry season. Seed germinates best at the temperature range from 20 to 25° C and grows best at 18 - 25° C. average daily temperatures of 20 to 25° C are optimum for fruit setting. The fruits of sweet pepper are subjected to sunscald at high temperature and intense sunshine.

**Nursery management**

Seeds are sown in raised beds under protected structures about 28 to 30 days before planting. The average seed rate is 250-300g/ha. Seeds are sown with a row spacing of 15 cm and seed spacing of 0.5cm. Before sowing the prepared beds should be drenched with Trichoderma + Pseudomonas culture @ 2% to manage damping off.

**Varieties**

Open pollinated varieties are Arka Mohini, Arka Gaurav, Arka Basant, California wonder and Pusa Deepti. Bharat, Indra, Sun 1090 and Green Gold are popular hybrids.

**Planting**

The optimum spacing for capsicum is 60cm x 70cm. Planting should preferably be done in raised bed and in pit size of 15x20cm. Before planting, the seedlings should be dipped for 15 minutes in Trichoderma + Pseudomonas culture @ 10% to manage wilt problems.

**Nutrient management**

FYM should be applied @ 5.0 kg/m<sup>2</sup> along with neem cake @ 200g/m<sup>2</sup>. At the time of planting seedlings should be treated with Azospirillum + PSB culture (20%) for 15 minutes. The addition of vermicompost @ 1kg/m<sup>2</sup> after one month of planting improves growth. The nutrients should be properly managed as deficiency causes poor fruit development and fruit size. Interculture and irrigation Light earthing up should be done after 30 days and 45 days of planting. Good quality water should be applied at weekly intervals. The plants should be provided with stakes to prevent lodging.

## Diseases

### 1. Bacterial wilt

Wilt is the most devastating disease caused by soil borne bacteria. It infects and destroys the plants by wilting them. Its infection is most rapid in water logged condition

#### Management

Soil drenching with Pseudomonas culture @ 2 % before planting. • Soil drenching with Bordeaux mixture (1:1:100) after 15 days of planting.

### 2. Leaf spot

It is one of the important disease which causes severe damage by dropping leaves and fruits. It is caused by Cercospora and Colletotrichum.

#### Management

Removal and burning of affected leaves. Spraying with Bordeaux mixture (1:1:100) after 15 days of planting.

### 3. Leaf curl

Leaf curl and mosaic are the most common viral diseases of capsicum.

#### Management

Cultivation of resistant variety. Removal and destruction of affected plants.

### 4. Fruit borer

Fruit borer (Spodoptera) is the most important pest of capsicum. It causes serious damage during the fruit development stage. The larva feeds on the pulp by making a hole. The infested fruit becomes unfit for consumption.

#### Management

Application of NPV @ 0.5ml/l after 15 days of fruit set. Regular monitoring, collection and destruction of eggs, larva, adults. Spraying of neem based products.

## Yield

The average yield of capsicum under protected conditions may vary 1-1.5kg/plant with the fruit number of 20-30/plant and fruit weight of 40- 50g.