

## Diseases of Solanaceous crop and their control

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### Tomato-

#### Damping off –

It is common in nursery bed and young seedling .It mostly occur rainy season .the most affected plant part is seedling.

#### Symptom-

Brown water soaked soft lesion later plants shrivel ,collapse and topple.In older plants , lesions are brownish black nad the jnfection points are thin.

#### Causal organism-

It is caused by species of pythium, phytophthora but most common is pythium.

2. Light irrigation, proper drainage, proper plang spacing.
3. Dry seed treatment with captan or thiram 3g/kg.

#### Late blight of tomato –

It is commonly occur in january - february .Most common plant part affected is leaves, stem and fruits of tomatk plant.

#### Symptom-

Leaves have large ,dark brown blotches witha green grey edge.Under moist condition whitish fungal growth is observed on lesion



#### Control –

1. Raising nursery on raiswd bed in light soil.

developed on the underside of leaves.In hight hunidity ,thin powdery white gungal growth appears on infected leave,fruits and stem.

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Fruits become dark, greasy spots which enlarge and cover the entire fruit completely. Rooting of fruits and emission of foul odor.



### Causal organism-

It was caused by fungus *Phytophthora infestans*.

### Control-

1. Estimation of crop debris and volunteer plants.
2. Spray of Dithane Z-78 is effective in controlling disease.
3. Dusting with copper lime is helpful where spraying is impracticable.

### Chilli-



### Anthracnose or dieback –

This disease is common in almost all chilli growing areas of the world. In India, it occurs in serious form in Punjab, Haryana, Rajasthan, Uttar Pradesh, Andhra Pradesh, Assam, Bihar and Himachal Pradesh.

Anthracnose disease of chilli is generally most common among the tropical and sub-tropical countries. It occurs in September to October. This disease affects leaves, fruit and stem.

### Symptom –

Leaves become small, irregular, with circular brownish black scattered spots and later defoliation. Fruit becomes small, black, with circular lesions over fruits. The lesions enlarge and look elliptical. The attacked part turns back, depressed and wrinkled, and ultimately the fruits shrivel and dry up. Dieback attacks spreading gradually from the top to downward.



**Casual organism-**

It was caused by pathogen  
Colletotrichum capsici.

**Control-**

1. Spraying of captafol (0.2%) followed by copper oxychloride (0.25%).
2. Remove the affected plant from the field.

**Chilli leaf curl virus-**



It is a DNA virus from the genus *Begomovirus* and the family *Geminiviridae*. It causes severe disease especially in pepper (*Capsicum* spp.), but also affects other crops such as tomato (*Solanum lycopersicum*). Among the viral diseases it is most serious.

**Symptom-**

As a result of the disease leaf curl becomes deformed. The leaf curls towards the midrib and the plants become stunted in growth. Fruiting is greatly affected. Flower buds drop before attaining full size and anthers do not contain pollen grains.

**Causal organism-**

It is caused by white fly.

**Control-**

1. The infected plant should be uprooted and burnt or buried to avoid further infection.
2. Spraying of insecticide imidacloprid (0.003%) was most effective.
3. Grow chilli leaf curl resistant variety

**Brinjal-**



**Phomopsis blight –**

It is a very serious disease of brinjal. The disease occurs when spores are released from a fungal fruiting body and dispersed by

splashing rain, insects, and contaminated equipment.

**Causal organism-**

It is caused by fungus phomopsis vexans.

**Symptom-**

The fungus attacks all part of the plant above ground. The small circular spot develop on the leaves which turn grey to brown with light coloured centre. Severely infected leaves turn yellow and later with cracked, torn tissue. Stem may develop brown to dark, cracked and sunken cankers.

**Control-**

1. Collect seed from healthy fruits.
2. Treat seed with thiram or captan 3g/kg seed.
3. Give hot water treatment at 50degree centigrade for 30 minutes.
4. Grow resistant varieties like pusa Bhairav,

Florida market

**Little leaf of brinjal-**

It is one of the most serious disease of brinjal in the areas of its cultivation. This disease cause heavy loss to crop.

**Causal organism -**

It is caused by mycoplasma like organism (MLO) and transmitted by leaf hopper.

**Symptom-**

The characteristic symptom are reduction in size of leaves , excessive growth of auxillary branches and thinning of plant growth. Affected plants give rosette like appearance. The developing fruits become hard, tough and fail to mature.

**Control-**

1. Rouge out the affected plants.
2. Grow resistant varieties such as arka sheel , Manjari gota , Banaras giant.
3. Spray the crop with dimethoate (0.005%) at 10 days interval.





## Potato-

### Common scab-

This disease is not very common in India but it is observed in light intensity in hilly areas of U.P., West bengal and Meghalaya.



### Symptom -

Small reddish or brownish spot appear in the surface of potato tuber which ultimately develop into lesions. In deep scab lesions are 1-3mm deep but darker than shallow scab. The organism survive for many years in the soil remain active. Low soil moisture also favours the multiplication of pathogens.

### Control -

1. Maintain the soil reaction between 5 and 5.3.
2. Keep the field in well irrigated condition during tuberization.
3. Application of sulphur 20kg/ acre helps in reducing the disease incidence.
4. Seed treatment with 0.1% mercuric chloride sodium for 24 hrs.

## Fusarium wilt-

It is a nasty but common disease that enters potato plants through the roots, thus restricting water flow to the plant. Fusarium wilt on potatoes is difficult to manage because it can live in the soil for many years.



### Symptom -

The first sign of potatoes with fusarium wilt is yellowing of the leaves, following by wilting, rolling, or curling, sometimes affecting leaves on only one side of the plant. Symptoms of fusarium wilt typically begin on the lower part of the plant, eventually moving up the stem. The wilt leaves completely and then the affected plants wilt rapidly.

### Control -

1. Use disease certified seed.
2. Seed tubers treated with Dithane M- 45 .
3. Avoid excessive watering.
4. Rotate plants with other plants for 4 to 6 years.
5. Sterilize tools frequently using a solution of one part bleach to four part water when working with potato.