WELCOME

Sr.No.	Disease Name	Causal Organism
1.	**Fire blight of apple**	***Erwinia amylovora***
2.	**Citrus Canker**	**Xanthomonas campestris pv. citri**
3.	Bacterial Blight of Pomegranate:	*Xanthomonas axonopodis* pv. *punicae*
4.	**Bacterial Blight On Wheat**	*Pseudomonas syringae* subsp. *syringae*
5.	**Bacterial mosaic of wheat:**	***Clavibacter michiganense subsp. tessellarius***
6.	**sugarcane gumming disease**	**Xanthomonas axonopodis pv.vasculorum**
7.	**Ratoon stunting disease in sugarcane:**	**Leifsonia xyli subsp. xyli**
8.	**Bacterial Spot of Tomato**	***Xanthomonas campestris* pv. *vesicatoria***
9.	**Bacterial speck of *tomato***	***Pseudomonas syringae* pv.**

10.	Black leg of potato	*Erwinia spp*
11.	**Bacterial Wilt of brinjal**	**Psedomonas solancearum**
12.	**Angular leaf spot of pumpkin**	*Pseudomonas syringae* pv. *lachrymans*
13.	**Bacterial Canker of mango**	***Xanthomonas campestris pv. mangiferaeindicae***
14.	**Bacterial leaf blight:**	***Xanthomonas oryzae pv. oryzae***
15.	**Bacterial leaf streak**	***Xanthomonas campestris p.v. oryzicola***
16.	Moko disease of Banana	Pseudomonas solanacearum
17.	**Rhizome Rot or Tip Over Disease of Banana**	*Erwinia carotovora*
18.	**Bacterial leaf spot on cauliflower:**	Pseudomonas *syringae* pv. *maculicola*
19.	**Bacterial soft rot of carrot**	Erwinia carotovora ssp. carotovora
20.	**Black Rot Of Crucifer**	*Xanthomonas campestris pv. campestris*

21.	Citrus greening disease	*Candidatus Liberibacter*
22.	**yellow vine disease of cucurbits:**	***Serrata mrcescens***
23.		

BACTERIAL DISEASE OF PLANTS AND DIFFERENT TYPE OF SYMPOTOMS

Fire blight of apple & pear: *Erwinia amylovora*

All symptoms are above ground and are typically easy to recognize. Symptoms on blossoms include water soaking of the floral receptacle, ovary, and peduncles. This results in a dull, gray-green appearance at 1–2 weeks after petal fall, and eventually tissues will shrivel and turn black

Citrus Canker: Xanthomonas campestris pv. citri

The disease causes necrotic dieback, general tree decline, premature fruit drop, and fruit blemishes. Severely infected trees become weak, unproductive, and unprofitable.

Bacterial Blight of Pomegranate:
Xanthomonas axonopodis pv. *punicae*

Initially, spots are black and round and surrounded by bacterial ooze. Under favorable conditions,
spots enlarge to become raised, dark
brown lesions with indefinite margins that cause the fruit to crack. The disease may cause up to 90% yield reduction.

Bacterial Blight On Wheat
Pseudomonas
syringae subsp. *syringae*

Symptoms:

The initial lesions appear as small water-soaked spots. The lesions expand and then appear as dry dead tissue. The spots often join within a few days to form large blotches. The entire surface area of an infected leaf may be affected. During wet periods, bacterial ooze may develop within the lesions.

Bacterial mosaic of wheat: *Clavibacter michiganense subsp. tessellarius*

The pathogen produces typical orange, mucoid colonies with entire margins on specific media. The pathogen also attacks triticale. This mosaic effect is produced by uniformly distributed small yellow lesions, with illdefined margins

Angular leaf spot of pumpkin *Pseudomonas syringae* pv. *lachrymans*

pumpkin sample showing marginal chlorosis (yellowing) of the leaves. The combination of symptoms and the presence of the bacteria in the sample were indicative of a bacterial disease. Angular leaf spot is a common bacterial disease of pumpkins and other cucurbits that causes chlorosis and necrosis (death) of leaf tissue.

1.Bacterial leaf blight rice:
Xanthomonas oryzae pv. oryzae

Symptoms:

The bacterium induces either wilting of plants or leaf blight. Wilt syndrome known as

Kresek is seen in seedlings within 3-4 weeks after transplanting of the crop.

Bacterial leaf streak of rice
Xanthomonas campestris
p.v. oryzicola

Symptoms

Fine translucent streaks appear between the veins of the leaf are the first symptoms. The

lesions enlarge lengthwise and advance over larger veins laterally and turn brown.

sugarcane gumming disease Xanthomonas axonopodis pv.vasculorum

Yellow stripes on sugarcane leaf.
Middle: Chlorosis of sugarcane leaves.
Right: Necrosis of nodes and growing point of sugarcane stalk.

Yellow bacterial slime exuding from sugarcane stalks infected with X. campestris pv. vasculorum.

Ratoon stunting disease in sugarcane: Leifsonia xyli subsp. xyli

Symptoms:

The presence of pin head like orange coloured dots of bacteria on the internal soft tissue in the nodal region.

Stunted growth, thin stalks with short internodes; pale yellowish foliage and rapid tapering of the stem towards the top are other symptoms.

Bacterial Spot of Tomato
Xanthomonas
campestris* pv. *vesicatoria

Initial leaf symptoms are small, circular-to-irregular, dark lesions, which may be surrounded by a yellow halo. The lesions tend to concentrate on the leaf edges and tip and may increase in size to a diameter of 3-5 mm. Infected leaves may develop a scorched appearance. When spots are numerous, foliage turns yellow and eventually dies, leading to defoliation of the lower portion of the plant.

Bacterial speck:*Pseudomonas syringae* pv. *tomato*

On leaves, symptoms appear as black specks, usually no more than 2 mm in diameter, which are usually surrounded by a yellow halo. Speck lesions sometimes cause distortion of the leaf, as the infection restricts the expansion of leaf tissue.

Black leg - *Erwinia spp*

- Aerial stem rot & tuber soft rot
- Black leg begins from a contaminated seed piece
- Stem bases - an inky-black to light-brown decay, extend up the stem from less than an inch to more than two feet
- These enlarge into a soft, mushy rot that causes entire stems to wilt and die
- Leaves - roll upward at the margins, become yellow, wilt & often die

Inky black to light-brown stem decay of blackleg originating from the potato seed piece and extending above ground up the stem. Note wilting leaves of infected plant.

Irregular, brownish black, soft, mushy stem lesions characteristic of aerial stem rot

Bacterial Wilt:Psedomonas solancearum

The characteristic symptoms of the disease are wilting of the foliage followed by **collapse** of the entire plant. The wilting is characterized by gradual, sometimes sudden, **yellowing**, withering and drying of the entire plant or some of its branches.

Bacterial Canker of mango
Xanthomonas campestris pv. mangiferaeindicae

Canker is a serious disease in India. The disease causes fruit drop (10-70%), yield loss (10-85%) and

storage rot (5-100%). Many commercial cultivars of mango including Langra, Dashehari, Arnrapali,

Mallika and Totapuri are susceptible to this disease. The disease is found on leaves, petioles, twigs,

branches and fruits.

Moko disease of Banana:Pseudomonas solanacearum

Typically, yellowing and wilting of older leaves occur, as well as reduced fruit size and eventual rotting of the fruit. In addition, flowers can become blackened and shriveled, and the vascular tissue discolored.

Rhizome Rot or Tip Over Disease of Banana:*Erwinia carotovora*

The affected plants show discoloration and soft rotting of rhizomes and suckers. In severe cases toppling of the whole plant can happen.

Bacterial leaf spot on cauliflower: Pseudomonas *syringae* pv. *maculicola*

Small, black spots form on leaves and heads. When leaf spots merge they can form somewhat irregular-shaped spots resembling downy mildew. Different fungicides are recommended for managing these diseases, therefore accurate diagnosis is critical.

Bacterial soft rot of carrot
Erwinia carotovora ssp. carotovora

Bacterial **soft rot** appears as a **soft**, watery, and slimy decay of the taproot. The decay rapidly consumes the core of the **carrot**, often leaving the epidermis intact. A foul odor may be associated with **soft rot**.

Aboveground **symptoms** include a general yellowing, wilting, and collapse of the foliage.

Black Rot Of Crucifer
Xanthomonas campestris pv. campestris

Symptoms :
Symptoms of black rot vary considerably depending on the host, cultivar, plant age and environmental conditions. The bacteria can enter plants through natural openings and wounds caused by mechanical injury on roots and leaves.

Citrus greening disease - *Candidatus Liberibacter*

Yellow shoots, twig dieback, and tree decline.

Older leaves developing a characteristic mottling or patchy discoloration.

Veins that are often prominent and yellow.

yellow vine disease of cucurbits: *Serrata mrcescens*

Terminal leaves stand erect, fail to expand, and the margins curl inwards. Older leaves develop scorched margins and may die. The phloem in the crown and lower stem turns honey-colored. Eventually, the root begins to decompose, a process that is hastened by secondary rot organisms, and the whole plant begins to decline and die.

Thank you