

# **CHS3403 Plant Pathological Principles of Cannabis and Herbs**

**- Diseases of cannabis and herbal plants caused by bacteria**

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### 3. Symptoms of plant diseases caused by bacteria

**1. Leaf dryness or leaf blight (blight):** The infection infects plants causing rapid and widespread necrosis.



**2. Because bacteria produce enzymes to digest plant cells, the cell wall is damaged, resulting in the outflow of cell fluid, leading to tissue decay and decay. The damaged part is discolored.**



### **3. Symptoms of plant diseases caused by bacteria**

**3. Spots are caused by necrosis of infected tissue. Spots may turn turquoise. Usually, the range of spots is limited.**



**4. Nodules and nodules are symptoms in which the infected tissues divide cells at a higher rate than normal. and large**



### 3. Symptoms of plant diseases caused by bacteria

**Ulcer is caused by tissue growth on leaves, branches, stems and fruits.**



**6. Vascular disease. Some pathogens enter the plant's pipeline and spread the disease to various parts. Plants will block and cause plants to wither.**



## **4. Characteristics and symptoms of bacterial diseases**

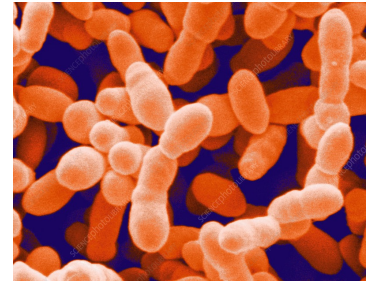
- 1. Vegetables decay**
- 2. Corn rotting**
- 3. Fungosis**
- 4. Drying or burn**
- 5. Bacterial ulcer**
- 6. Plant disease**
- 7. Bacterial sca**

# Characteristics and symptoms of bacterial diseases

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## 1. Bacterial soft rot

**Etiology: Staphylococcus carotovora, Staphylococcus acidophilus, Pseudomonas arginine.**



*E. carotovora*

### Disease symptoms

- Destroy fruits, tubers, stems, branches and buds of succule
- Initially, the wound will become soft, soft or mucous.
- The rotten area is light brown or colorless.
- There is a strong stench.
- Disease conditions: hot air, high humidity



# Characteristics and symptoms of bacterial diseases

## 1. Bacterial soft rot

### disease control

- 1. Do not cause unnecessary scratches or tears on plant parts.**
- 2. When transporting agricultural products to the market, they should be packed in separate containers.**
- 3. Spray 40 g/water of chemical substances, such as cupavit or coppicide, every 3-5 days.**
- 4. Use antibiotics, such as Agrimicin and Agritrep, to spray in the field or soak in the harvested crops.**

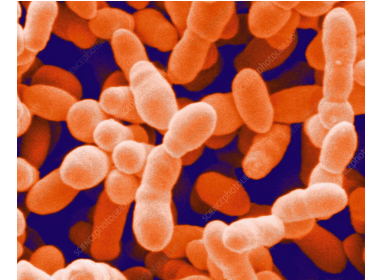
# Characteristics and symptoms of bacterial diseases

## 2. Bacterial soft rot or top rot

**Cause: Staphylococcus carotovora**

**Disease symptoms**

- It occurs on the top, trunk, root and bark.
- The leaves turn pale and dry.
- Rotten trunk, brown or gray.
- It smells bad.
- Disease conditions: hot, humid, especially rainy season



*E. carotovora*





# Characteristics and symptoms of bacterial diseases

## 2. Bacterial soft rot or top rot

### disease control

1. The antibiotic 100 (streptomycin 18.8% and oxytetracycline 1.5%) should be mixed with water to the concentration of streptomycin 200. Ppm is sprayed every 7 days.

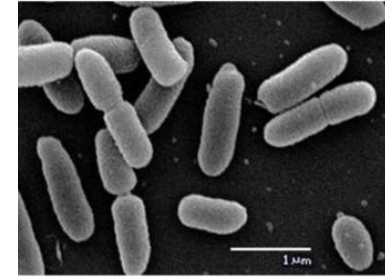
2. Avoid planting corn in epidemic areas.

3. Immediately remove and burn the diseased plants, and place lime in the diseased area.

4. Planting disease-resistant maize varieties

5. Planting rotation in places where there was an epidemic.

# Characteristics and symptoms of bacterial diseases



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## 3. Bacterial mycosis

**Etiology:** *Staphylococcus* and *Staphylococcus solanacearum*. *R. solanacearum*

### Disease symptoms

- It exists in vegetables, horticulture and ornamental plants.
- Plant pipeline system disease
- Bacteria enter the pipeline, causing water and food delivery failure.



Cause plants to wither and die.

- If the bacteria spread to the leaves, cracks will appear.



# Characteristics and symptoms of bacterial diseases

## 3. Bacterial mycosis

### disease control

1. Use disease-resistant varieties
2. Crop rotation
3. Use disease-free seeds and branches
4. Eliminate disease-carrying insects

