

## **PATHOGENIC MICROORGANISMS**

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### **Abstract**

Pathogen is a general term for microorganisms and parasites that can cause disease. Parasites include mainly protozoa and worms, and the majority of microorganisms include viruses, chlamydia, rickettsia, mycoplasma, spirochetes, and fungi. There are more than 400 types of microorganisms that can infect a person, they are mainly distributed in the mouth, nose, throat and digestive organs of a person.

**Keywords.** Pathogenic, rickettsia, gommosis, tuberculosis, burn, pseudomonas fobacia, pseudomonas angulata, phytopathogenic bacteria, bacteriosis, black rot, rot, burn disease.

### **Enter**

Pathogenic microorganisms, bacteria, cause various diseases in humans and animals. These include staphylococci, streptococci, pneumococci, meningococci, gonococci. These cause various inflammations in people. For example: staphylococci cause a scaly furuncle in a person. Cattle, sheep and goats, horses, white mice and white mice are very resistant to pathogenic staphylococci. Pathogenic streptococci cause various inflammations in humans and animals, pneumococci cause pneumonia, meneumcocci cause meningitis, and gonococci cause gonorrhea. The causative agent of cholera is Pasteurella, and the causative agent of brucellosis is the bacterium Brucella coca. Pathogenic anaerobic bacteria are the causes of tetanus, botulism, gas gangrene, tissue decay and other diseases. Pathogenic corynebacteria cause diphtheria, pathogenic mycobacteria cause tuberculosis, and oatogenic rickettsiae cause typhoid fever.

Phytopathology studies bacteria that cause various diseases in plants. The science of phytopathology began to be established in the 30s of the XIX century. Diseased plants were first identified by D. Kandol. Beryllia was the first to study bacterial diseases in 1882. Currently, spore-forming and non-spore-forming bacteria, mycobacteria, pseudomonads and other microorganisms that cause various diseases in plants belonging to more than 300 species are known. Among the pathogens, monophages (infecting only one type of plant) and polyphages (infecting many types



of plants) are known. 25% of bacteriosis cases occur in our country, these diseases can occur in specific areas or in a wide area. Due to the disease of technical plants, it causes great damage to the industry. For example, blight in grain berries, wilting, and powdery mildew are common in corn. 60% of gommosis occurs in cotton, 15-60% as a result of blackworm in grains, and 70-96% as a result of canker disease in tomatoes. It is also widely found in trees such as birch, fir, and beech, which are used in wood construction. Photopathogenic pseudomonads. There are many types of these and they cause different diseases in different plants. It causes scab disease in wheat.

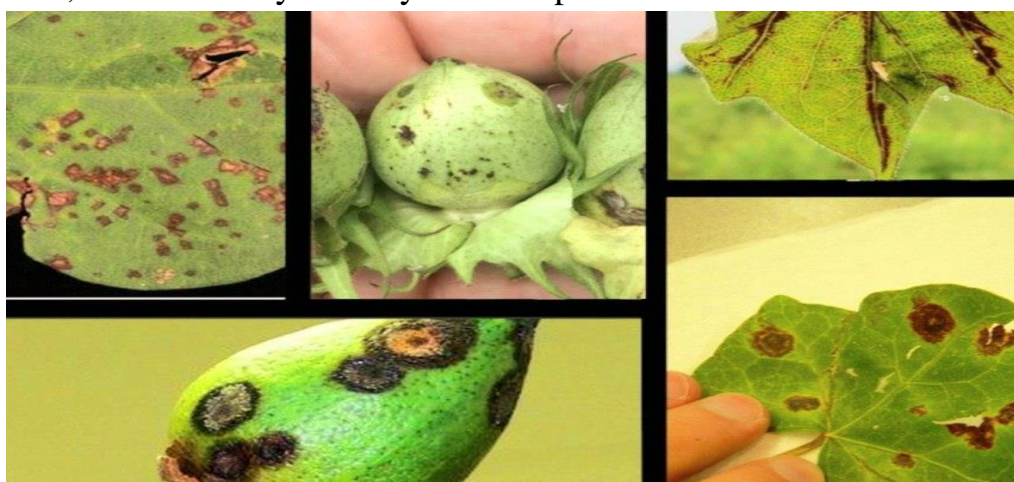
This disease of wheat is common everywhere in our country. Symptoms of the disease prevent the milk ripening of the grain in the wheat ear. Damaged spikes, furrows, stalks, stems, leaves and root necks turn into a black spore mass. The following types are common and especially harmful: wheat and rye hard plant nodules are eaten, and blackworm bags are stored in the seeds as separate spores. Infected grain gives off a pungent odor in moist air, hard stones of barley and oats damage the nodule of blackworm spores, but not damage to the pods and spikes, the hard black mass of the spore pierces the shell of the ear.



Malvacearum causes gommosis in cotton. Dark green round or triangular oily spots appear on the leaves of the infected plant, and the stem is also affected. Then dark-green, then black spots are formed on the cysts. The stem remains brittle. Along with



reducing the yield, the disease has a negative effect on the quality of the fiber. This disease is spread through infected seeds, all growers are found in the regions. Under the influence of gommosis, damage to the damaged stem is observed in thin-fiber cotton varieties. Affected leaves usually fall off, young pods drop off, and later infected pods may not open or half open even when the fiber matures. Bolls are the most resistant organs of cotton to gommosis. Affected areas of cysts are eroded and transferred to fiber. The fiber acquires a yellowish-brown color and sticks to the inner walls of the pods. As a result, the seed does not ripen, remains dry and loses its viability. It significantly damages the quality and quantity of the crop. In order to prevent this, it is necessary to carry out the specified control measures in time.



*Ps. beticola* causes tuberculosis in beetroot. It mainly affects sugar beets and beets. Various tumors are formed in the root nodules of such infected beets. The disease is widespread in all areas where beets are grown in Russia and the USA. It spreads mainly through infected seeds, soil and plant debris.



*Ps.fobavia* infects the tobacco plant, as a result of damage to its leaves, the yield decreases by 40-50%. The disease spreads through infected seeds. *Ps.angularata* also produces yellow-green spots on tobacco leaves, and the tissues inside these spots are eaten.

*Ps. gorlenkovinum* causes cancer in tea plant. Bumps form under the bark. The disease is mainly spread in Georgia.

*Ps. phaseoli* infects leguminous plants. Brown spots appear on the leaves, and the yield decreases by 20-40%. In addition, alfalfa, potatoes, carrots, tomatoes, cucumbers, melons, pumpkins, cabbage, pears, mulberries, walnuts, citrus plants, lemons, oranges, tangerines, indoor flowers, oleanders, hyacinths, various bacterial diseases. widespread.

Phytopathogenic bacilli. These are also different and cause disease in plants. It even damages apricots, peaches and fruits, if it damages the leaves it will rot. This disease was first detected in Armenia. Phytopathogenic bacteria *Bac.pbytophthorum* causes potato blight. At the bottom of the phytophthora stem, the parenchyma passes through the tissues to other places and the stem becomes brittle. The disease spreads through infected nodules or soil, causing 5% to 50% yield loss.

*Bac.corovorum* causes rot disease in vegetables. *Bac.tracheipilum* causes wilt disease in cucumber, tomato and other plants belonging to this family. This disease is widespread throughout the world.



Phytopathogenic fungi. Information about the discovery of 187 species of *Verticillium* fungus was found in different countries during 150 years. The reason for the spread of the disease is that one plant is planted in the same place for a long time. The disease is spread mainly by infected plant debris, weeds, soil and water, but also by infected seeds and even through the air. This parasite infects the conducting tubes of the cotton plant and forms mycelium there. Conidia spread throughout the plant. First, yellow spots appear on the leaves of the plant, and then the plant fades. It has a strong effect especially during the development period of



cotton. In this case, the seed leaves will wither in 1-2 days. Cloves are susceptible to all bacterial diseases.

### Summary

Bacterial diseases are mainly spread through the residual organs of diseased plants. Sometimes the disease can spread through raindrops. Water is also one of the main means of spreading disease. In the spread of bacterial diseases, nematodes, slugs, and birds are mediators. In order to fight against bacterial diseases, it is necessary to know the biology of bacteria and the places where they are found. Bacterial diseases are mainly combated by chemical, agrotechnical and biological methods.

1. When fighting with chemical methods, it is necessary to medicate, disinfect the pen and the nodules before planting the seeds.
2. It is necessary to disinfect the soil in an agrotechnical way, leave it on the ground.
3. It is necessary to create favorable conditions for the development of antagonistic bacteria in the soil using the biological method.
4. Finally, creating a variety of plants resistant to bacterial diseases is one of the most important measures.

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