

The Dangers of Fungi

Fungi are both friend and foe. Some, such as mushrooms, provide food. Other fungi produce antibiotics such as penicillin. Many others break down dead tissue and recycle organic molecules, thereby keeping Earth from being buried under tons of unusable organic debris. Yet, fungi also damage crops, buildings, and animals. Fungi cause many plant diseases that can kill plants and cause sickness and death in animals that feed on infected plants. Fungi also directly cause some human diseases.

1- Plant pathogens Fungi that cause the plant diseases called rusts are difficult to control. Rusts are successful because they are pleomorphic—each species produces many kinds of spores that can infect different hosts. The wind can spread their spores over hundreds of miles. For example, *Puccinia graminis* is a fungus that causes black stem rust in cereal grains, such as rice and wheat.

2- Human pathogens Although bacteria and viruses cause most human diseases, fungi cause their share. Most fungi are dermatophytes, that is, they invade skin, nails, and hair. Some fungal spores can be inhaled into the lungs where they can establish an infection that can spread throughout the body.