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The World of Mushrooms

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A B S T R A C T

Fungi are heterotrophic organisms without plastids. They are ancient organisms. Fungi imagine parasites and saprophytes. Saprophytes are organisms that feed on dead organic matter. Some live in water. There are about 100,000 species of fungi and they are very common on land. Utar differs from algae in the absence of chlorophyll, and from bacteria in the presence of a nucleus. The vegetative body of the fungus is called the mussel, and it consists of a set of individual filaments, called hyphae. The mycelium of the fungus absorbs nutrients throughout its surface. In mycelium, spore-forming organs are formed. Reproduction is vegetative, asexual and sexual. Vegetative propagation by budding or division of mycelium. Asexual reproduction is accompanied by the formation of various spores. Sexual reproduction is similar to that of algae in low fungi, and higher fungi occur in the form of the merging of special genitals, the migration of one cell product to another, and the merging of nuclei in pairs. Depending on the structure and mode of reproduction of the mycelium, fungi are divided into low and high fungi. There are no barriers in the mycelium of lower fungi, and sexual reproduction is the same as in algae. The mycelium of higher fungi is barrier, that is, multicellular.

R T I C L E I N F O

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Yeast fungus is not a real mycelium, the body is made up of individual cells. The cell is mononuclear, oval in shape. This fungus reproduces by survival. The young cells formed as a result of germination form a chain without breaking. They live in a sugary environment. As a result of the activity of yeasts, sugar is broken down into alcohol and carbon dioxide. This process is of great practical importance in beer, wine and bakery. The energy released during the fermentation process is necessary for the life of the yeast. In baking, the carbon dioxide released when yeast is added to the dough makes the dough more pliable, that is, lighter and more porous.

The fungus is one of the most common fungi in nature. It is hollow, the fruit body is 10-12 cm long and consists of a foot and a cap. The fungus lives in saprophytes in humus-rich soils. Perennial mycelium in the ground accumulates nutrients as a reserve during the summer, and fruit bodies begin to form in the fall.

They mature in the spring of next year, come to the surface of the soil and scatter their spores. Spores form on the curved outer surface of the cap, that is, in the cells in the folds. Mushrooms belong to the group of conditionally edible fungi. The most commonly eaten fungi are white fungus, white birch fungus, and other fungi. They are rich in protein, as well as fats, minerals, and trace elements such as iron, calcium, zinc and others.

Parasitic fungi. There are many types of parasites among fungi. They cause various diseases in plants, animals and humans. Parasitic fungi, in particular, cause great damage to agriculture and forestry.

The rust fungus is characterized by a complex period of development, that is, the presence of various spores and intermediate hosts.

In Babor, the rust fungus begins to grow on the barberry plant, which is the intermediate host. Later it continues to live in the wheat plant. Throughout the summer, the parasitic fungus produces yellowish-red (rusty) spores. They damage the stems and leaves of the wheat plant . The spots on the stems and leaves are due to pigments in the spores, which look like rust spots on iron. That is why it is called the rust fungus. The affected plant does not produce spikes or the grains become empty. Parasitic fungi are also more difficult to control because their light spores are spread by wind and damage large areas. The best way to control rust fungi is to create new wheat varieties that are resistant to these fungi.

Verticill. White stalk - its spore-forming bands are ring-branched. This fungus lives as a parasite in the conductive tissues of various plants. The fungus infects plants with a specific disease called wilt or verticillium wilt. The main symptom of the disease is a loss of tension in the leaf cells, which first appear yellowish-brown, then brown spots, which leads to premature shedding of its leaves.

In Central Asia, Wilt's disease is a plague of cotton. Wilt passes through the cotton root, damaging the stem core and disrupting its normal growth. A plant infested with wilt often dies or an organ dies.

Measures to control the disease include the introduction of crop rotation on farms, the creation of new varieties of cotton resistant to wilt, deep and quality tillage, application of local fertilizers, and more.

The importance of fungi. Fungi are widespread and important in nature. They are involved in the metabolism in nature. Along with bacteria, the decomposition of organic matter: plant debris and animal carcasses is mainly carried out in the presence of fungi.

There are many different types of fungi in the soil. Fungi, as saprophytes, live in the remains of stems and roots. Some fungi live in symbiosis with higher plants and form mycorrhizae. However, some fungi cause damage to forestry. According to experts, wood rot fungi can make 30% of it completely useless.

Mycorrhiza is the symbiotic life of fungi with the roots of higher plants. Many terrestrial plants co-exist with soil fungi in this way. There are two main types of mycorrhizae: external (ectotrophic) and internal (endotrophic). In endotrophicmycorrhizae, the fungus enters the root tissue.

External mycorrhizae are mainly found in birch, oak and pine trees in forests. The fungus absorbs carbohydrates and vitamins from the roots of the tree. At the same time, the humus of the soil breaks down the proteins it contains into amino acids. Some of the amino acids are absorbed by plants. In addition, the fungus increases the root system of the tree, the swelling surface, which in turn is important for the plant, which grows in infertile soils.

Internal mycorrhizae are more common in herbaceous plants. But little is known about its role in symbiotic life.

Some fungi, as parasitic organisms, cause various diseases in plants and animals. Edible fungi are important for nutrition. Some species of fungi are used to make antibiotics and vitamins, as well as yeast.

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