

The Common Molds:

- Zygomycetes have life cycles that include a zygospore.
- Zygospore – is a resting spore that contains zygotes formed during the sexual phase of the molds life cycle.
- Rhizoids – root like hypae that penetrate the breads surface.
- Stolons – stem like hapae that run along the surface of the bread.

Life Cycle of Molds:

- Gametangia – sexual phase begins when hypae from different mating types fuse to produce gamete-forming structures.

The Sac Fungi:

- The phylum Ascomycota is named for the ascus, a reproductive structure that contains spores.

The Life Cycle of Sac Fungi:

- Conidia – tiny spores formed at the tips of specialized hypae called conidiophores.
- Ascus – forms within the fruiting body.

Yeasts:

- Budding - process of asexual reproduction

The Club Fungi:

- The phylum Basidiomycota or club fungi, gets its name from specialized reproductive structure that resembles a club.
- Basidium – spore bearing structure

Life Cycle of Fungi:

- Basidiospores – form at the edge of each basidium and within a few hours are ready to be scattered.

Diversity of club Fungi:

- Self Fungi grow near decaying trees.

Edible Mushrooms:

- Some mushrooms when cooked fully are a good source of nutrients
- Wild Mushrooms can be poisonous.

Imperfect Fungi:

- Deutermycota is an extremely varied phylum. It is composed of those fungi that are not placed in other phyla because researchers have never been able to observe a sexual phase in their life cycles.

Fungi are Heterotrophs:

- Saprobies – organisms that obtain food from decaying organic matter.

Fungi as Decomposers:

- Fungi play an essential role in maintaining equilibrium in nearly every ecosystem, where they recycle nutrients by breaking down the bodies and wastes of other organisms.

Fungi as Parasites:

- Parasitic fungi cause serious plant and animal diseases. A few cause disease in humans.

Plant Disease:

- One type is wheat rust that affects most crops in North America. Rusts are caused by a type of basidiomycete that needs two different plants to complete its life cycle.

Human Disease:

- Can cause athlete's foot on humans that affect that areas on the toes to crust up and feel.

Symbiotic Relationship:

- Some fungi form symbiotic relationship in which both partners benefit. Two such mutualistic associations, lichens and mycorrhizae, are essential to many ecosystems.

Lichens:

- Lichens – symbiotic associations between a fungus and a photosynthetic organism.

Mycorrhizae:

- Mycorrhizae - associations of plant roots and fungi.