

FUNGAL KINGDOM

Chytridiomycota

Zygomycota

(endomycorrhizae)

Ascomycota

Basidiomycota

Chytridiomycota

- Is a mild pathogen, exists in soil. Has chitin. Will invade into the plant cells and their rhizoid will suck it out.

The three main groups of the fungi kingdom are **Zygomycota, Ascomycota and Basidiomycota**. Differentiates in terms of their spores.

(endomycorrhizae) **Glomeromycota** are the symbionts.

They are all pathogens but for the most part are decomposers, are heterotrophs but feeds on the dead (Saprobies). Are important in the terms of CO₂ cycling in the atmosphere and ecological importance. Decomposes by secreting enzymes to the outside of the cell. [Filamentous fungal colony] Breaks down anything, protein, collagen etc. This is done by the exoenzymes outside of the cell. As you get broken down, the nutrients will be taken in through the mycelial structure and through the membranes and will be converted to starch or glucose that is required for the fungi to survive. Occurs with all three groups that exist within the fungal kingdom.

Zygomycota

- Known due to its zygospore. An Example of this would be black bread mold (Rhizopus). It grows through the bread and as it collects the nutrients from the bread it forms spores.
- The life cycle that occurs, when zygomycota is growing through some substrate and decomposing, it will form Hyphae and will form 2 mating types. It will grow in between to meet up and fuse. Under ordinary circumstances, the genetic states are haploid (1n). When the fusion process occurs which is known as **cytogamy** (formation of a cytoplasm) you'll get a zygote (2n) diploid form which then undergoes the formation of the complete sporangium structure known as the **zygote sporangium**.