

ECONOMIC IMPORTANCES OF FUNGI

INTRODUCTION → Fungi includes about 130 species which are of tremendous economic importance to men. Infact our life are linked with those of fungi. They play an important role in medicine antibiotics, alcoholic fermentation agriculture for the fertility of the soil and also causing crop and fruit disease. Forming basis of many industries and as important means of food.

Alcoholic fermentation is the basis of important industry not only in India but also through out the world.

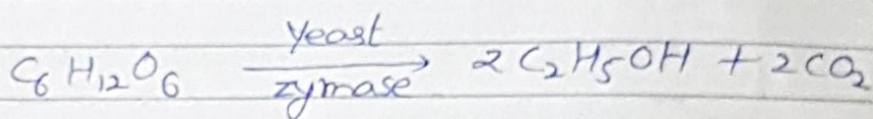
Some of the important industrial use of fungi are as follows -

1. Brewing and Bakery industries → Both brewing and bakery industry are depends upon the fact that the fermentation of sugar solution by yeast produces only alcohol and carbon dioxide.

In brewing industry alcohol is an important product for different types of wine production.

The other product from fermentation is CO_2 . Previously this was considered as useless products but now it is also a valuable products. It is collected solidified and sold as dry ice.

Yeast secretes the enzyme which called zymase. This bring about the conversion zymase of sugar into alcohol.



The yeast lack diastase enzyme, so they can't break starch into sugar. But many fungi are known to produce diastase and they can convert starch into sugar. This process is called saccharification. Those fungi which bring about saccharification are called moulds. They are mucor species of rhizopus and aspergillus.

From different fermentation method different types of breads are also prepared where CO_2 is the very useful product.

2. **Enzyme preparation** \rightarrow Polygyme and diastase etc. are synthesize from aspergillus. They are use for synthesize of starch and in textile industries. culture of aspergillus on moist

culture of condition as well known Amylase formed which contains starch components. Invertase is extracted from *Saccharomyces*. It has many industrial uses. It hydrolyses sucrose to mixture of glucose and fructose. A filament yeast is used in the production of vitamin Riboflavin.

3. **Preparation of Organic acid** → The important organic acid produced commercially as a result of the biochemical activities of mould. They are oxalic acid, citric acid, gluconic acid and fumaric acid.

Oxalic acid is the fermentation products of *Aspergillus*. Citric acid is made by mould fermentation by *Penicillium* which is used for organic acid synthesis.

4. **For preparation of Gibberellins** → These are plant hormones produce by the fungus *Gibberella* where gibberellin is used to the growth of several types of horticulture plant.

5. **In Cheese industry** → *Penicillium* are used in the preparation of cheese industry and in refining of cheese and also manufacture of protein *Saccharomyces* etc.