

MICROORGANISMS- FRIEND AND FOE

TOPIC- Commercial Importance/Economic Importance/Useful Aspects of Microorganisms

1. Cheese an important dairy product is produced from milk and is dependent upon the activity of microorganisms like Streptococcus lactis in dairy farms.
2. Curd is obtained from milk by the chemical action of lactic acid bacteria like Lactobacillus and Lactococcus.
3. Butter is made by churning the cream which has been soured by lactic acid bacteria.
4. Fermentation results in the production of carbon dioxide which causes the dough to rise (leavening) and brings about a desired change in the texture and flavour.
5. Yeast is a good source of Vitamin B complex and also rich in proteins.
6. The vinegar is obtained by the fermentation of fruits and sugar by bacteria called acetobacter.
7. Many supplement enzymes are obtained from bacteria.
8. Microorganisms like bacteria, algae and fungi with their combined action decompose the dead organic matters and develop the top layer of the soil profile with humus which is enriched with nutrients required for the plant growth.
9. Antibiotics are like Amoxylin, Streptomycin etc. are derived from the group fungus called pinicillium.
10. Alcohol produced by the fermentation of sugars by yeasts. Alcohol is used to manufacture sanitizers, cough syrups, surface cleansers etc.

TOPIC- Harmful Aspects of Microorganisms and Viruses

1. The most common harmful effects of the microorganisms is the causing of infectious disease in organisms including plants also. The word infection is defined as The invasion and multiplication of microorganisms such as bacteria, viruses, and parasites that are not normally present within the body. Some examples have been tabled as followed:

<u>Name of the disease</u>	<u>Causal microorganism group and Viruses</u>	<u>Causal microorganism</u>	<u>Host organism</u>
Common Cough and Cold	Virus	Rhino Virus	Human beings
COVID 19	Virus	Corona Virus	Human beings
Malaria	Protozoa	<u>Plasmodium vivax</u>	Human beings
Typhoid	Bacteria	<u>Salmonella typhi</u>	Human beings
Rust of wheat	Fungi	<u>Puccinia triticina</u>	Wheat Plant

2. The damp destroying the stored grains, food items like bread, cakes etc. and also the clothes and leather-made articles like shoes, bags, belts etc. are caused by fungus which is high economic loss.