



7. Write 10 lines on the usefulness of microorganisms in our lives.

Answer:

Micro-organisms are too small to be seen through naked eyes. However, they are vital to plants and the environment. *Lactobacillus* is used to form curd from milk.

- *Rhizobium* present in the roots of pulse plants fix nitrogen from air and supply nitrogen compounds to the pulse plants.
- Micro-organisms are also used in winemaking, baking, pickling, and other food making processes.
- Alcoholic fermentation by yeast is widely used in the preparation of wine and bread.
- Microbes are used to reduce pollution. For example, decomposers such as bacteria and fungi break down dead bodies and excreta to form inorganic compounds, which can be absorbed by plants.
- Microbes also play an important role in the preparation of medicines. Antibiotics are chemicals produced by micro-organisms to kill bacteria. Penicillin is an antibiotic made from *Penicillium*.
- Bacteria present in our intestine helps in proper digestion and release Vitamin B which is absorbed by intestine.
- Many vaccines are prepared from micro-organisms. These vaccines are given to children to protect them from disease.
- Certain microbes are also used in the biological treatment of sewage and industrial effluents.
- Yeast is used in making idlis, bhaturas, bread, pastries and cakes.

8. Write a short paragraph on the harms caused by microorganisms.

Answer:

Micro-organisms cause diseases in animals. For example, in humans, bacteria cause diseases such as tuberculosis, cholera, typhoid, etc. In cattle, the foot and mouth disease is caused by a virus. Also, several microbes cause diseases in plants. For example, the productivity of wheat, orange, apple, etc. is reduced due to microbial diseases in plants. Certain microbes, on entering into our body, produce toxic substances. This leads to food poisoning. Some micro-organisms such as fungus spoil our food. For example, bread when left unused under moist conditions gets spoiled by fungus, producing a white cotton-like growth on the bread.

9. What are antibiotics? What precautions must be taken while taking antibiotics?

Answer:

Antibiotics are medicines produced by certain micro-organisms to kill other disease-causing micro-organisms.

Precautions to be taken while using antibiotics:

- Antibiotics should be taken under the supervision of a well qualified doctor.
- Course (intake) of antibiotics should be completed as per the prescription given by the doctor.
- Antibiotics should be taken in the right amount and at the right time. A wrong dose of antibiotics makes the drug

ineffective. Also, excessive consumption of drugs may kill the useful bacteria present in our body.

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