## **Friendly Microorganisms**

### **Friendly Microorganisms**

Not all microorganisms are harmful! Some are very helpful to humans and the environment. These are called friendly microorganisms.

#### i. In Making Food Products

Microorganism	Use	
Lactobacillus	Turns milk into curd (yogurt)	
Yeast	Helps in making bread, cakes by producing CO₂ (makes dough rise)	
Bacteria	Used in making cheese, vinegar, and pickles	

### ii. In Medicine (Making Antibiotics)

Some microorganisms help in making medicines called antibiotics that kill harmful bacteria.

Antibiotic	Made From	Use
Penicillin	Penicillium fungus	Fights bacterial infections

## iii. In Cleaning the Environment

- Certain bacteria and fungi decompose dead plants and animals.
- They are called decomposers.
- They help recycle nutrients into the soil.

#### iv. In Agriculture

- Some bacteria live in the soil and fix nitrogen from the air into the soil.
- This increases soil fertility.

Microorganism	Function	
Rhizobium	Fixes nitrogen in root nodules of legume plants like pea and beans	

## v. In Making Alcohol and Wine

• Yeast is used to make alcohol and wine by the process of fermentation (sugar  $\rightarrow$  alcohol + CO<sub>2</sub>)

# **Summary Table**

Use	Microorganism	Example
Food production	Lactobacillus, Yeast	Curd, Bread, Cheese
Medicine (Antibiotics)	Penicillium	Penicillin
Decomposition	Bacteria, Fungi	Clean environment
Nitrogen fixation	Rhizobium	Soil fertility
Alcohol production	Yeast	Fermentation