

# Uses of Microorganism

# Food and Beverage Industry:

## **Making Curd and cheese:**

- Bacterium – Lactobacillus
- Cheese – By adding different bacteria – Different types of cheese

## **Preparing bread:**

- <https://youtu.be/tPksjG--NaA>

# Food and Beverage Industry:

## **Making Idli, Dosa and Dhokla:**

- Idli, Dosa – Natural fermentation since bacteria is present in the mixture
- Dhokla: requires yeast – No natural fermentation
- Soft and fluffy

## **Making alcohol and alcoholic drinks:**

- Fermentation of sugar by yeast – formation of alcohol
- Wine – fermentation of sugar in grapes
- Beer – germinating barley

# Food and Beverage Industry:

## Other uses:

- Kelp – seaweed – algae - used as food – rich in potassium and iodine
- Algin – algae – to thicken foods like ice-creams and jellies



# Making medicines and vaccines:

**Antibiotics: Kill or stop the growth of microbes**

- Bacteria and fungi
- Penicillin
- Streptomycin
- Tetracycline
- erythromycin

**Vaccines: Injecting dead or weakened microbes (Immunization)**

- Cholera
- Typhoid
- Hepatitis
- Measles
- Polio
- Tuberculosis

# Making medicines and vaccines:

## **Vitamin B complex tablets:**

- Bacteria and yeast

## **Insulin:**

- Bacteria

# Agriculture:

## Rhizobium:

- Gram, pea and bean

## Blue – green algae:



# Cleaning the Environment:

## **Bacteria, fungi and protozoa:**

- Decompose the tissues of dead organisms into simple substances and restores the nutrients back to soil
- Decompose sewage and other wastes
- Algae – give off oxygen





# Other uses:

## **Bacteria and protozoa:**

- Living in digestive system of animals – helps to digest grass and plants by breaking down cellulose

# Other uses:

## In Industries - Bacteria

- Tanning – making animal skin into leather
- Jute industry – fibres of jute were separated from other tissues and woven into cloth

## Tanning:



# Other uses:

- Biogas
- Animal waste – decomposed by bacteria in the absence of oxygen – to produce methane



Thank you