



# NAVJIVAN SCIENCE COLLEGE, DAHOD

Conducted by : Dahod Anaj Mahajan Sarvajanic Education Society, Dahod

Affiliated with Shri Govind Guru University, Godhra

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## Best Practices-1

### Good Practices of Bio-fertilizers

**Title: "To make Bio-fertilizer from soil microorganisms"**

#### **Process Objectives:**

1. Isolation of microorganism from soil sample already buried with dry leaves of plants from college campus garden
2. Checked activity of isolated microorganism by using specific substrate agar plates
3. Bio fertilizer were used with soil directly and also used with coal and applied for plant growth

The objective for making biofertilizers typically includes several key goals aimed at promoting sustainable agriculture and environmental health. Here are some common objectives:

- A. Enhancing Soil Fertility:** Biofertilizers aim to improve soil fertility by providing essential nutrients such as nitrogen, phosphorus, and potassium in a form that plants can readily absorb.
- B. Promoting Plant Growth:** They stimulate plant growth by enhancing nutrient uptake and improving root development, leading to healthier and more productive crops.
- C. Reducing Chemical Dependency:** By reducing the reliance on synthetic fertilizers and pesticides, biofertilizers contribute to sustainable agricultural practices and minimize environmental pollution.
- D. Balancing Ecosystems:** They support beneficial microbial communities in the soil, fostering natural nutrient cycling and enhancing biodiversity in agricultural ecosystems.
- E. Cost-effectiveness:** In the long term, biofertilizers can be cost-effective compared to synthetic alternatives, especially when considering reduced input costs and improved yields.
- F. Environmental Sustainability:** They contribute to reducing the environmental footprint of agriculture by decreasing greenhouse gas emissions and chemical runoff into water bodies.





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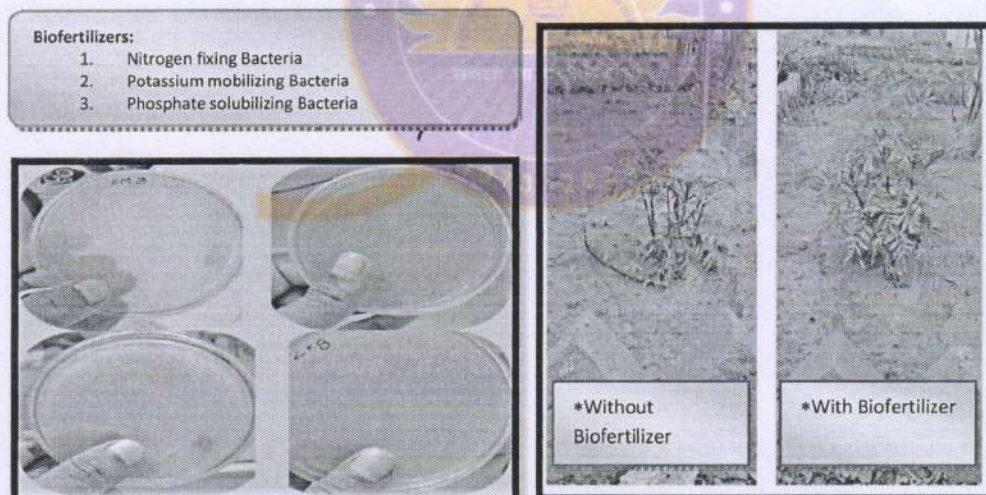
## The Context:

- The main contextual feature or we can say the challenges were faced :
  - a. The maintenance of microbial strain sustainability against soil structure
  - b. The purity of strain
  - c. The activity rate and possible outcome after applying the biofertilizers into soil
  - d. What is the ratio of different biofertilizers used

## The practices

- This almost very good experience for the institute to use biofertilizers for green and sustainable ecosystem approach for vegetation
- There are 3 types of strain were isolated like Nitrogen fixing , phosphorus solubilizing bacteria were used as biofertilizers
- These biofertilizers worked amazingly with reference to chemical fertilizer
- More and healthy growth promoting activity were determined from biofertilizers

## Evidence of Result:



- There is a significant growth increase while applying biofertilizers





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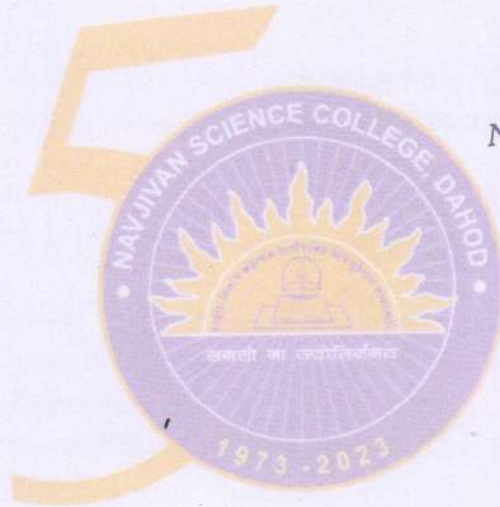
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## Problem encountered and Resources required:

- The major problem with biofertilizers was the concentration determination of biofertilizers with context to soil nature and area covered
- Another problem was determined that volume used as field size and crop species varies
- This is small scale production of biofertilizers but when it is practice at large scale then there is requirement of some specific advancement in production system



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