

## Agricultural Microbiology Training Program

This foundational program trains participants in the core methods of agricultural microbiology including microbial isolation, soil analysis, biofertilizer production, and plant-microbe assays, preparing candidates for careers in agri-biotech and sustainable farming.

**Note: Below modules are designed keeping high end industrial professionals into consideration. Please refer individual protocols below for affordable prices.**

### Soil Microbiology Protocols

#### Agricultural Microbiology Training Module

**Fee: Rs 125000/-**

#### Protocols List

1. Soil Sampling and Handling Procedures
2. Quantification of Microbial Biomass in Soil
3. Soil Texture, pH, EC, and Organic Matter Analysis
4. Total Bacterial and Fungal Count via Serial Dilution
5. DNA Extraction from Soil Using Commercial Kits
6. 16S rRNA PCR Amplification and Agarose Gel Visualization
7. Rhizospheric vs Non-Rhizospheric Microbial Comparison
8. Soil Health Index Calculation Using Microbial Indicators
9. Assessment of Soil Enzyme Activities (Dehydrogenase, Phosphatase)
10. Metagenomic Shotgun Sequencing of Soil DNA

### Biofertilizer Production Protocols

#### Agricultural Microbiology Training Module

**Fee: Rs 150000/-**

### **Protocols List**

1. Isolation of Rhizobium, Azospirillum, Azotobacter
2. Carrier Material Sterilization and Mixing Techniques
3. Mass Culturing in Fermenters (Pilot Scale)
4. Viability Testing of Biofertilizer Formulations
5. CFU Enumeration in Biofertilizer Samples
6. Shelf Life Assessment of Stored Biofertilizers
7. Quality Assurance Testing as per BIS Standards
8. Application Protocols for Legumes and Non-legumes
9. Field Trial Design for Biofertilizer Performance
10. Liquid Biofertilizer Formulation and Stabilization

## **Plant-Microbe Interaction Protocols**

### **Agricultural Microbiology Training Module**

**Fee: Rs 135000/-**

### **Protocols List**

1. PGPR Assays on Seed Germination and Root Elongation
2. In Vitro Antagonistic Activity Against Phytopathogens
3. IAA and Phosphate Solubilization Assays
4. Mycorrhizal Colonization Staining and Scoring
5. Root Hair Deformation Assay for Symbiotic Signaling
6. Colonization Efficiency Using GFP-Labeled Bacteria
7. Greenhouse Assay of Plant Growth Enhancement
8. Split Root Assay for Systemic Induced Resistance (ISR)
9. Gene Expression Profiling for Plant Response to Microbes
10. Confocal Microscopy of Plant-Associated Microbes

## **Biocontrol Agent Protocols**

### **Agricultural Microbiology Training Module**

**Fee: Rs 160000/-**

### **Protocols List**

1. Screening for Antagonism: Dual Culture and Zone of Inhibition

**Assays**

- 2. Production of Lytic Enzymes (Chitinase, Glucanase)**
- 3. Secondary Metabolite Profiling via TLC and HPLC**
- 4. Greenhouse Pot Trial of Disease Suppression**
- 5. Formulation of Biocontrol Agents with Additives**
- 6. Compatibility Testing with Agrochemicals**
- 7. Insecticidal Activity of Microbial Metabolites**
- 8. Volatile Organic Compounds (VOCs) Assay from Antagonists**
- 9. Genome Sequencing of Biocontrol Candidates**
- 10. Field-Scale Demonstration Plots and Data Collection**

## Individual Protocols Under Agricultural Microbiology Training Program

1. Soil Sampling and Handling Procedures | [\*\*Fee: 15000\*\*](#) ( **Rupees Fifteen Thousand** )
2. Quantification of Microbial Biomass in Soil | [\*\*Fee: 18000\*\*](#) ( **Rupees Eighteen Thousand** )
3. Soil Texture, pH, EC, and Organic Matter Analysis | [\*\*Fee: 14000\*\*](#) ( **Rupees Fourteen Thousand** )
4. Total Bacterial and Fungal Count via Serial Dilution | [\*\*Fee: 10000\*\*](#) ( **Rupees Ten Thousand** )
5. DNA Extraction from Soil Using Commercial Kits | [\*\*Fee: 25000\*\*](#) ( **Rupees Twenty Five Thousand** )
6. 16S rRNA PCR Amplification and Agarose Gel Visualization | [\*\*Fee: 30000\*\*](#) ( **Rupees Thirty Thousand** )
7. Rhizospheric vs Non-Rhizospheric Microbial Comparison | [\*\*Fee: 12000\*\*](#) ( **Rupees Twelve Thousand** )
8. Soil Health Index Calculation Using Microbial Indicators | [\*\*Fee: 10000\*\*](#) ( **Rupees Ten Thousand** )

9. Assessment of Soil Enzyme Activities (Dehydrogenase, Phosphatase) | [Fee: 20000](#) ( **Rupees Twenty Thousand** )
10. Metagenomic Shotgun Sequencing of Soil DNA | [Fee: 60000](#) ( **Rupees Sixty Thousand** )
11. Isolation of Rhizobium, Azospirillum, Azotobacter | [Fee: 18000](#) ( **Rupees Eighteen Thousand** )
12. Carrier Material Sterilization and Mixing Techniques | [Fee: 12000](#) ( **Rupees Twelve Thousand** )
13. Mass Culturing in Fermenters (Pilot Scale) | [Fee: 35000](#) ( **Rupees Thirty Five Thousand** )
14. Viability Testing of Biofertilizer Formulations | [Fee: 8000](#) ( **Rupees Eight Thousand** )
15. CFU Enumeration in Biofertilizer Samples | [Fee: 6000](#) ( **Rupees Six Thousand** )
16. Shelf Life Assessment of Stored Biofertilizers | [Fee: 10000](#) ( **Rupees Ten Thousand** )
17. Quality Assurance Testing as per BIS Standards | [Fee: 12000](#) ( **Rupees Twelve Thousand** )
18. Application Protocols for Legumes and Non-legumes | [Fee: 10000](#) ( **Rupees Ten Thousand** )
19. Field Trial Design for Biofertilizer Performance | [Fee: 15000](#) ( **Rupees Fifteen Thousand** )
20. Liquid Biofertilizer Formulation and Stabilization | [Fee: 20000](#) ( **Rupees Twenty Thousand** )
21. PGPR Assays on Seed Germination and Root Elongation | [Fee: 10000](#) ( **Rupees Ten Thousand** )
22. In Vitro Antagonistic Activity Against Phytopathogens | [Fee: 10000](#) ( **Rupees Ten Thousand** )
23. IAA and Phosphate Solubilization Assays | [Fee: 8000](#) ( **Rupees Eight Thousand** )
24. Mycorrhizal Colonization Staining and Scoring | [Fee: 10000](#) ( **Rupees Ten Thousand** )
25. Root Hair Deformation Assay for Symbiotic Signaling | [Fee: 8000](#) ( **Rupees Eight Thousand** )

26. Colonization Efficiency Using GFP-Labeled Bacteria | [Fee: 15000](#) ( Rupees Fifteen Thousand )
27. Greenhouse Assay of Plant Growth Enhancement | [Fee: 15000](#) ( Rupees Fifteen Thousand )
28. Split Root Assay for Systemic Induced Resistance (ISR) | [Fee: 15000](#) ( Rupees Fifteen Thousand )
29. Gene Expression Profiling for Plant Response to Microbes | [Fee: 25000](#) ( Rupees Twenty Five Thousand )
30. Confocal Microscopy of Plant-Associated Microbes | [Fee: 40000](#) ( Rupees Forty Thousand )
31. Screening for Antagonism: Dual Culture and Zone of Inhibition Assays | [Fee: 8000](#) ( Rupees Eight Thousand )
32. Production of Lytic Enzymes (Chitinase, Glucanase) | [Fee: 10000](#) ( Rupees Ten Thousand )
33. Secondary Metabolite Profiling via TLC and HPLC | [Fee: 20000](#) ( Rupees Twenty Thousand )
34. Greenhouse Pot Trial of Disease Suppression | [Fee: 18000](#) ( Rupees Eighteen Thousand )
35. Formulation of Biocontrol Agents with Additives | [Fee: 12000](#) ( Rupees Twelve Thousand )
36. Compatibility Testing with Agrochemicals | [Fee: 9000](#) ( Rupees Nine Thousand )
37. Insecticidal Activity of Microbial Metabolites | [Fee: 12000](#) ( Rupees Twelve Thousand )
38. Volatile Organic Compounds (VOCs) Assay from Antagonists | [Fee: 18000](#) ( Rupees Eighteen Thousand )
39. Genome Sequencing of Biocontrol Candidates | [Fee: 60000](#) ( Rupees Sixty Thousand )
40. Field-Scale Demonstration Plots and Data Collection | [Fee: 20000](#) ( Rupees Twenty Thousand )

**Please contact on +91-7993084748 for more details**

Cant Come to Hyderabad or Chennai or Bangalore? No Problem, You can do it in Virtual / Online Mode

