

BIOFERTILIZER TECHNOLOGY • MICROBIAL SKILL DEVELOPMENT



NTHRYS
OPC PVT LTD



Biofertilizer Products Manufacturing Training Programs

A complete industrial catalogue of hands-on microbial production
training modules — from nitrogen fixers to formulation technology.

99

PROGRAMS

12

CATEGORIES

2026

EDITION

Program Categories at a Glance

This catalogue lists every biofertilizer and allied bio-input our training centre is equipped to manufacture and teach, organised into 12 technology streams. Each program carries a unique product code for easy reference, enrolment and certification.

STREAM	CATEGORY FOCUS	DESCRIPTION	COUNT
NBP-NF	Nitrogen-Fixing Biofertilizers	Symbiotic, free-living, associative & endophytic N-fixers	12
NBP-CA	Cyanobacterial & Algal Biofertilizers	Blue-green algae, Azolla & microalgal soil inoculants	8
NBP-PB	Phosphorus Biofertilizers	Phosphate solubilizing & mobilizing cultures	6
NBP-KM	Potassium, Silicate & Micronutrient Biofertilizers	K, Si, Zn, Fe, S & Mn solubilizing inoculants	8
NBP-MY	Mycorrhizal Biofertilizers	Arbuscular & ecto-mycorrhizal symbiotic fungi	8
NBP-PG	PGPR & Plant Growth Promoters	Rhizobacteria, phytohormone & stress-modulating strains	8
NBP-SM	Specialty Microbial Biofertilizers	Phototrophic, actinomycete, yeast, LAB & consortia	7
NBP-ST	Stress-Tolerant & Climate-Resilient Biofertilizers	Salinity, drought, temperature & pH adapted strains	6
NBP-OD	Organic Decomposers & Compost Cultures	Residue, waste & manure decomposing microbial cultures	8
NBP-BC	Microbial Biocontrol Agents	Fungal & bacterial antagonists and bio-pesticides	10
NBP-FT	Formulation & Product-Form Technology	Carrier, liquid, granular, encapsulated & nano formats	12
NBP-BS	Biostimulants & Allied Bio-Inputs	Seaweed, humic, amino-acid & elicitor based inputs	6
Total training programs			99

HOW TO READ A CODE

NBP – NF – 01

NBP Nthrys Biofertilizer Program NF Category stream 01 Program number

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-NF-01	Rhizobium Inoculant	Symbiotic root-nodule N-fixer for pulses & legumes.
NBP-NF-02	Bradyrhizobium Inoculant	Slow-growing N-fixer for soybean & groundnut.
NBP-NF-03	Mesorhizobium Inoculant	Nodulating N-fixer for chickpea & pigeon pea.
NBP-NF-04	Sinorhizobium / Ensifer	Fast-growing N-fixer for lucerne & alfalfa.
NBP-NF-05	Azorhizobium	Stem-nodulating N-fixer for Sesbania green manure.
NBP-NF-06	Frankia Inoculant	Actinorhizal N-fixer for Casuarina & Alnus.
NBP-NF-07	Azotobacter	Free-living aerobic N-fixer for cereals & vegetables.
NBP-NF-08	Azospirillum	Associative N-fixer for rice, wheat & grasses.
NBP-NF-09	Gluconacetobacter diazotrophicus	Endophytic N-fixer for sugarcane.
NBP-NF-10	Herbaspirillum	Endophytic N-fixer for grasses & cereals.
NBP-NF-11	Beijerinckia	Acid-tolerant free-living N-fixer for plantations.
NBP-NF-12	Clostridium	Anaerobic free-living N-fixer for waterlogged soils.

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-CA-01	Anabaena	Heterocystous BGA N-fixer for paddy fields.
NBP-CA-02	Nostoc	Nitrogen-fixing blue-green algae for rice.
NBP-CA-03	Aulosira	High-efficiency paddy-soil BGA inoculant.
NBP-CA-04	Tolypothrix	Filamentous N-fixing cyanobacterium.
NBP-CA-05	Calothrix	Soil-surface N-fixing cyanobacterium.
NBP-CA-06	Azolla–Anabaena	Aquatic-fern symbiotic biofertilizer for rice.
NBP-CA-07	Spirulina Soil Conditioner	Microalgal-biomass soil amendment.
NBP-CA-08	Chlorella-Based Promoter	Eukaryotic microalgal growth promoter.

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-PB-01	Bacillus megaterium (PSB)	Phosphate-solubilizing bacterial inoculant.
NBP-PB-02	Pseudomonas striata (PSB)	Organic-acid phosphate-solubilizing bacteria.
NBP-PB-03	Aspergillus niger (PSF)	Phosphate-solubilizing fungal culture.
NBP-PB-04	Penicillium bilaiae (PSF)	Phosphate-mobilizing fungal biofertilizer.
NBP-PB-05	Burkholderia P-Solubilizer	Rhizosphere phosphate-solubilizing strain.
NBP-PB-06	Rock-Phosphate Microbial Blend	Microbe-enriched low-grade rock phosphate.

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-KM-01	Frateuria aurantia (KSB)	Potassium-solubilizing bacterial inoculant.
NBP-KM-02	Bacillus mucilaginosus (KSB)	Slime-forming K-mobilizing bacteria.
NBP-KM-03	Silicate-Solubilizing Bacteria	Silicon-releasing Bacillus inoculant.
NBP-KM-04	Zinc-Solubilizing Bacteria	Zinc-mobilizing bacterial culture.
NBP-KM-05	Iron / Siderophore Producer	Iron-mobilizing Pseudomonas strain.
NBP-KM-06	Sulphur-Oxidizing Bacteria	Thiobacillus for sulphur availability.
NBP-KM-07	Manganese-Solubilizing Bacteria	Manganese-mobilizing inoculant.
NBP-KM-08	Multi-Micronutrient Consortium	Combined Zn–Fe–Mn–S culture.

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CATEGORY • NBP-MY

Mycorrhizal Biofertilizers

Arbuscular & ecto-mycorrhizal symbiotic fungi

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PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-MY-01	Glomus / Rhizophagus (AMF)	Arbuscular mycorrhiza for field crops.
NBP-MY-02	Funneliformis (AMF)	Root-symbiotic P-mobilizing mycorrhiza.
NBP-MY-03	Gigaspora (AMF)	Spore-based arbuscular mycorrhizal inoculant.
NBP-MY-04	Acaulospora (AMF)	Acid-soil adapted arbuscular mycorrhiza.
NBP-MY-05	Pisolithus (Ecto)	Ectomycorrhiza for forestry & nursery.
NBP-MY-06	Laccaria (Ecto)	Ectomycorrhizal inoculant for plantation trees.
NBP-MY-07	Mycorrhizal Consortium	Multi-species VAM formulation.
NBP-MY-08	Mycorrhiza + Helper Bacteria	Combined mycorrhiza-helper synergy pack.

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-PG-01	Pseudomonas fluorescens	Root-colonizing growth-promoting bacteria.
NBP-PG-02	Bacillus subtilis	Spore-forming multi-trait PGPR.
NBP-PG-03	Bacillus amyloliquefaciens	High-vigour rhizosphere PGPR.
NBP-PG-04	Phytohormone (IAA) Producer	Auxin-secreting root-growth strain.
NBP-PG-05	ACC-Deaminase Strain	Stress-alleviating ethylene-modulating PGPR.
NBP-PG-06	Methylobacterium (PPFM)	Pink-pigmented facultative methylotroph.
NBP-PG-07	Paenibacillus	N-fixing growth-promoting rhizobacteria.
NBP-PG-08	VOC-Producing PGPR	Volatile-mediated plant-growth enhancer.

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-SM-01	Rhodopseudomonas (PNSB)	Photosynthetic bacteria for rice & aqua soils.
NBP-SM-02	Rhodospirillum (PNSB)	Phototrophic nitrogen-fixing bacteria.
NBP-SM-03	Streptomyces (Actinomycete)	Growth-promoting & antagonistic actinobacteria.
NBP-SM-04	Saccharomyces (Yeast)	Yeast-based root-zone biofertilizer.
NBP-SM-05	Lactic Acid Bacteria	Fermentation-based soil & foliar culture.
NBP-SM-06	Effective Microorganisms (EM)	Mixed multifunctional microbial consortium.
NBP-SM-07	Endophytic Biofertilizer	In-planta colonizing microbial inoculant.

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CATEGORY • NBP-ST

Stress-Tolerant & Climate-Resilient Biofertilizers

Salinity, drought, temperature & pH adapted strains

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PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-ST-01	Halotolerant Inoculant	Salinity-tolerant biofertilizer for saline soils.
NBP-ST-02	Drought-Tolerant Inoculant	Osmotic-stress-resilient microbial strains.
NBP-ST-03	Thermotolerant Inoculant	Heat-stable culture for hot climates.
NBP-ST-04	Psychrotolerant Inoculant	Cold-active biofertilizer for hill agriculture.
NBP-ST-05	Acid-Soil Tolerant	Low-pH adapted microbial inoculant.
NBP-ST-06	Alkaline-Soil Tolerant	High-pH adapted microbial inoculant.

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CATEGORY • NBP-OD

Organic Decomposers & Compost Cultures

Residue, waste & manure decomposing microbial cultures

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PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-OD-01	Cellulolytic Culture	Cellulose-degrading composting microbes.
NBP-OD-02	Lignolytic Culture	Lignin-degrading decomposer inoculant.
NBP-OD-03	Crop-Residue Decomposer	Stubble & straw rapid-decomposition culture.
NBP-OD-04	Trichoderma Decomposer	Fungal compost accelerator.
NBP-OD-05	Vermicompost Enrichment	Microbe-enhanced vermiculture culture.
NBP-OD-06	Biogas Slurry Enrichment	Digestate-fortifying microbial inoculant.
NBP-OD-07	FYM / Manure Enrichment	Farmyard-manure microbial fortification.
NBP-OD-08	Waste-to-Compost Accelerator	Agro / municipal-waste composting culture.

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CATEGORY • NBP-BC

Microbial Biocontrol Agents

Fungal & bacterial antagonists and bio-pesticides

10

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-BC-01	Trichoderma viride	Antagonistic fungal biocontrol agent.
NBP-BC-02	Trichoderma harzianum	Soil-borne pathogen-suppressing fungus.
NBP-BC-03	Pseudomonas fluorescens (BC)	Bacterial antagonist & resistance inducer.
NBP-BC-04	Bacillus subtilis (BC)	Antifungal spore-forming biocontrol bacteria.
NBP-BC-05	Bacillus thuringiensis (Bt)	Insecticidal crystal-protein bacterium.
NBP-BC-06	Beauveria bassiana	Entomopathogenic fungus for pest control.
NBP-BC-07	Metarhizium anisopliae	Green-muscardine insect-pathogenic fungus.
NBP-BC-08	Lecanicillium / Verticillium	Whitefly & aphid biocontrol fungus.
NBP-BC-09	Purpureocillium (Nematode)	Nematode-parasitic biocontrol fungus.
NBP-BC-10	Trichoderma + Pseudomonas Combo	Dual-action biocontrol consortium.

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-FT-01	Lignite Carrier	Lignite-based solid carrier formulation.
NBP-FT-02	Peat Carrier	Peat-based inoculant formulation.
NBP-FT-03	Charcoal Carrier	Charcoal-based carrier biofertilizer.
NBP-FT-04	Vermiculite / Clay Carrier	Mineral-carrier formulation.
NBP-FT-05	Biochar Carrier	Biochar-immobilized microbial product.
NBP-FT-06	Liquid Biofertilizer	Cell-protectant broth formulation.
NBP-FT-07	Granular / Pellet	Granulated field-applied biofertilizer.
NBP-FT-08	Wettable Powder	Dispersible powder formulation.
NBP-FT-09	Encapsulated / Alginate Bead	Immobilized-cell bead technology.
NBP-FT-10	Biofilm Biofertilizer	Multi-species biofilm-based product.
NBP-FT-11	Seed-Coating / Pelleting	Seed-applied inoculant technology.
NBP-FT-12	Nano-Biofertilizer	Nano-encapsulated controlled-release product.

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CATEGORY • NBP-BS

Biostimulants & Allied Bio-Inputs

Seaweed, humic, amino-acid & elicitor based inputs

6

PROGRAMS

CODE	TRAINING PROGRAM	DESCRIPTION
NBP-BS-01	Ascophyllum Seaweed Extract	Brown-seaweed growth biostimulant.
NBP-BS-02	Kappaphycus Seaweed Extract	Red-seaweed sap biostimulant.
NBP-BS-03	Humic Acid Product	Humic-substance soil conditioner.
NBP-BS-04	Fulvic Acid Product	Fulvic-fraction foliar biostimulant.
NBP-BS-05	Protein Hydrolysate	Amino-acid based plant biostimulant.
NBP-BS-06	Chitosan / Elicitor	Defense-eliciting bio-input.

ENROL • CULTURE • PRODUCE

Build a Career in Biofertilizer Manufacturing

Every program in this catalogue is delivered as hands-on training on working laboratory and production equipment — covering strain handling, mother & bulk culture, fermentation, carrier & liquid formulation, quality control, packaging and bio-safety compliance. Mix and match programs to design a track that fits your goals.

99 training programs

12 technology streams

Unique **product code** for every module

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