### **Technology Developed & Commercialization**

### Technology Developed for Mass Production of Biofertilizers Liquid Formulations Anubhav Brand products: 7

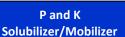
- Nitrogen fixers
  - Azotobacter chroococcum ABA-1 (For all crops)
  - Azospirillum lipoferum ASA-1 (For cereal crops)
  - Rhizobium sp. (Crop specific for leguminous crops and oil seeds)
- Phosphate solubilizer (For all crops)
  - Bacillus coagulans PBA 16
- Potash mobilize (For all crops)
  - Enterobacter asburiae AAU KMBW1
- Bio NP Consortium (For all crops):
  - ➤ Nitrogen fixer (Azotobacter /Azospirillum/Rhizobium + PSB)
- Bio NPK Consortium (For all crops):

Nitrogen Fixer

(Azotobacter/Azospirillum/Rhizobium)

Nitrogen fixers (Azotobacter & Azospirillum) + PSB and KMB (3 different Bacillus sp.)







Bio NP and Bio NPK Consortium

#### Biodecomposer Bacterial Cultures: Total six (6) ligno-cellulytic bacterial strains

Name of culture	NCBI (USA) Accession No.
Pseudomonas stutzeri AAU BDCT 1	MK801245
Pseudomonas aeruginosa AAU J2	MH591221
Lactobacillus plantarum AAU L2	KJ396071
Bacillus subtilis AAU B3	MH591228
Bacillus velezensis AAU BDCT 2	MK801267
Cellulomonas sp.	

## Methylotrophic Bacterial Cultures: Total six (6) rhizopheric and phyllospheric methylotrophic bacterial strains

Name of culture	NCBI (USA) Accession No.	
Rhizospheric		
Bacillus aerius AAU M8	KC787582	
Paenibacillus illinoisensis AAU M 17	KJ 577634	
Bacillus megaterium AAU M29	KC787585	
Phyllosphere		
Staphylococcus saprophyticus strain M 3	KY090784	
Bacillus subtilis subsp. spizizenii strain M 10	KY090785	
Bacillus methylotrophicus strain M 15	KY090786	

Mass production technology developed for *Azolla* and disseminated to farmers. Providing seed culture for mass multiplication at their own field



#### Liquid Biofertilizer Technology Commercialization (PPP)

# No. Details MOU has been signed for AAU's Bio NPK liquid biofertilizer production technology transfer between AAU and AMUL Dairy, Anand, Gujarat on 09-05-2022.



MOU for Bio NPK liquid biofertilizer production technology between AAU and Indore Smart City Development Limited, Indore, MP, signed on 27-08-2021. Indore city has ranked first as the cleanest (*Swachh*) City in the country and have sludge radiation unit plant supported by Bhabha Atomic Research Station as a part of environment conservation and now AAU technology licensing will support them to fortify and recycle hygienised sludge as good quality manure as well as production of liquid biofertilizers for farmers. The signed MOU handed over by CEO of Smart City Development project, Shri Rishav Gupta and team to Dr R V Vyas during his visit to Indore sludge plant on Sept 20, 2021.



MOU for Bio NPK liquid biofertilizer technology transfer between AAU and M/s Narmada Bio-chem Ltd., Ahmedabad signed on 18-10-2020 in esteemed presence of honorable Minister, Agriculture, Farmers' Welfare and Cooperation, Government of Gujarat, Shri R. C. Faldu and Secretary, Department of Agriculture Shri Manish Bhardwaj. Liquid biofertilizer product launched with the name "Narmada Bio-NPK"







MOU for Bio NPK liquid biofertilizer production technology between AAU and M/s GUJCOMASOL, Ahmedabad signed on 10-07-2018.



MOU for Bio NPK liquid biofertilizer production technology between AAU and M/s Margosa Biogrow India Pvt. Ltd. Vadodara signed on 01-06-2018 in esteemed presence of presence of Shri Parshottam Rupalaji, Hon. Minister of State, Dept of Agricultural Cooperation and Farmers Welfare, Government of India and Shri Jaydrathsinh Parmar, Hon. Minister of State (Dept of Agriculture), Govt of Gujarat. Liquid biofertilizer product launched with the name "Phyton NPK"





MOU for Bio NPK liquid biofertilizer production technology between AAU and Ahmedabad Municipal Corporation, Ahmedabad signed in vibrant Gujarat Programme on 11-01-2017. Product of hygienized sludge fortified with Bio NPK liquid biofertilizer named "BIO GOLD"







MoU of Anubhav Bio-NPK Liquid biofertilizer consortium between Anand Agricultural University and Gujarat Agro Industries Corporation Ltd., Gandhinagar signed on 30-04-2015 in esteemed presence of Hon'ble CM of Gujarat Mrs. Anandiben Patel on the occasion of Krushi Mahotsav-2015







MoU for liquid biofertilizer production technology for Nitrogen fixers (*Azotobacter and Azospirillum*) and Phosphate solubilizer signed between AAU and Gujarat Agro Industries Corporation Limited (Ahmedabad) on 22/11/2011. Liquid biofertilizer product launched with the name "Agro Jaivika"



Gujarat Agro Industries Corporation Ltd.

(A Government Enterprise )



MoU for liquid biofertilizer production technology for Nitrogen fixers (*Azotobacter and Azospirillum*) and Phosphate solubilizer signed between AAU and Gujarat State Fertilizers and Chemicals Limited (Vadodara) on 29/06/2011. Liquid biofertilizer product launched with the name "Sardar"







MoU for liquid biofertilizer production technology for Nitrogen fixers (*Azotobacter and Azospirillum*) and Phosphate solubilizer signed between AAU and Kemrock Agritech Private Limited (Asoj, Vadodara) on 19/01/2011. Liquid biofertilizer product name "Tapak Bund".

