Bioprospecting of Microbial Resources of Arunachal Pradesh

DBT-APSCS&T Centre of Excellence for Bioresources & Sustainable Development,
Arunachal Pradesh State Council for Science & Technology
Department of Science & Technology, Government of Arunachal Pradesh
Kimin-791121, District: Papumpare, Arunachal Pradesh

VISSION

❖**To serve as the pivotal laboratory of DBT-APSCS&T Centre of Excellence for Bioresources and Sustainable Development, spearheading innovative microbial biotechnology interventions to address the unique unmet challenges of Arunachal Pradesh, while promoting sustainable development and improving the livelihoods of indigenous communities.**

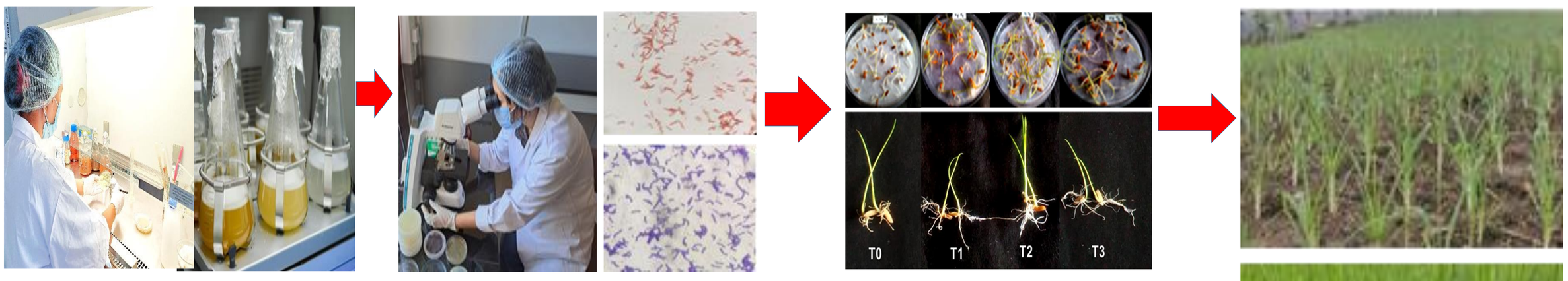
MISSION

- ❖ **Conduct cutting-edge research and development in microbial biotechnology for developing innovative solutions for climate-resilient agriculture in Arunachal Pradesh.**
- ❖ **Validate fermented foods for their nutritional and nutraceutical properties, harnessing the potential of microbial fermentation for enhanced food security and health outcomes.**
- ❖**Explore bioresource-based bioproduction techniques to produce sustainable products with high nutraceutical value and minimal environmental impact.**
- ❖**Develop a comprehensive microbial database to catalogue and analyse indigenous microbial strains, facilitating future research and innovation in microbial biotechnology.**
- ❖**Engage in various livelihood generation avenues based on bioresources, empowering indigenous populations with socio-techno-economic opportunities and fostering inclusive growth.**

The quest for harnessing rich abundant microbial diversity of the state of Arunachal Pradesh motivate us to pursue microbial biotechnology R&D on the following thematic areas:

➢Climate Resilient Agriculture System for a sustainable future

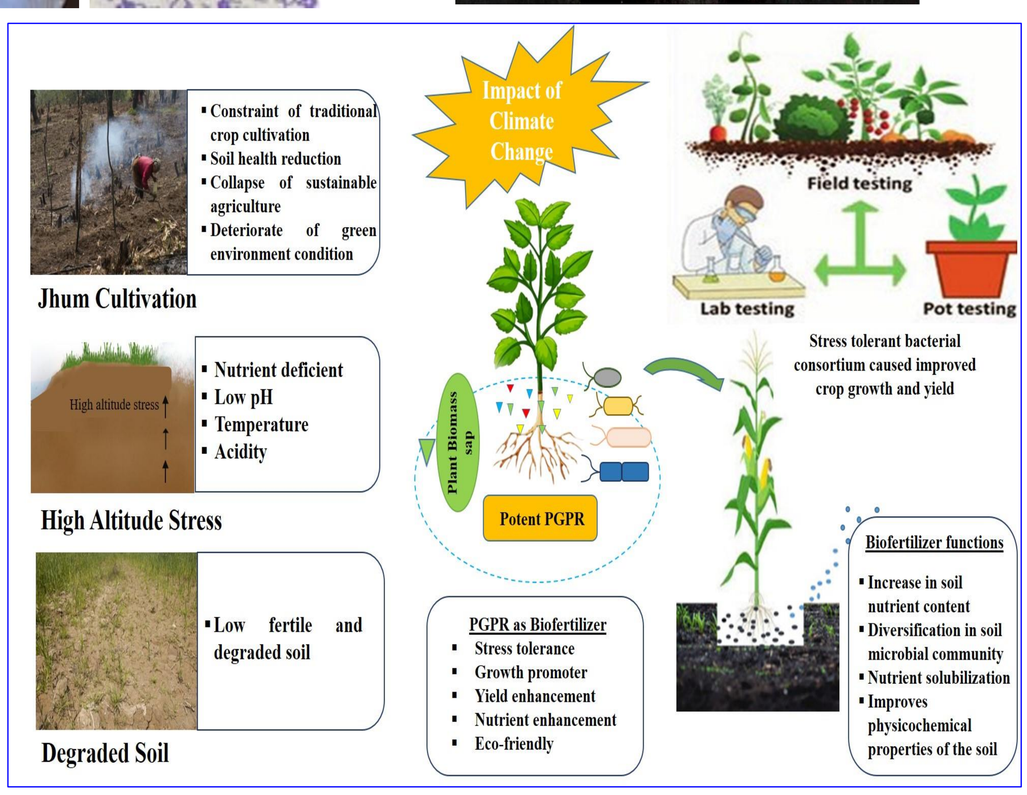
➢Promotion of fermented food products of Arunachal Pradesh as promising nutraceuticals and functional foods.

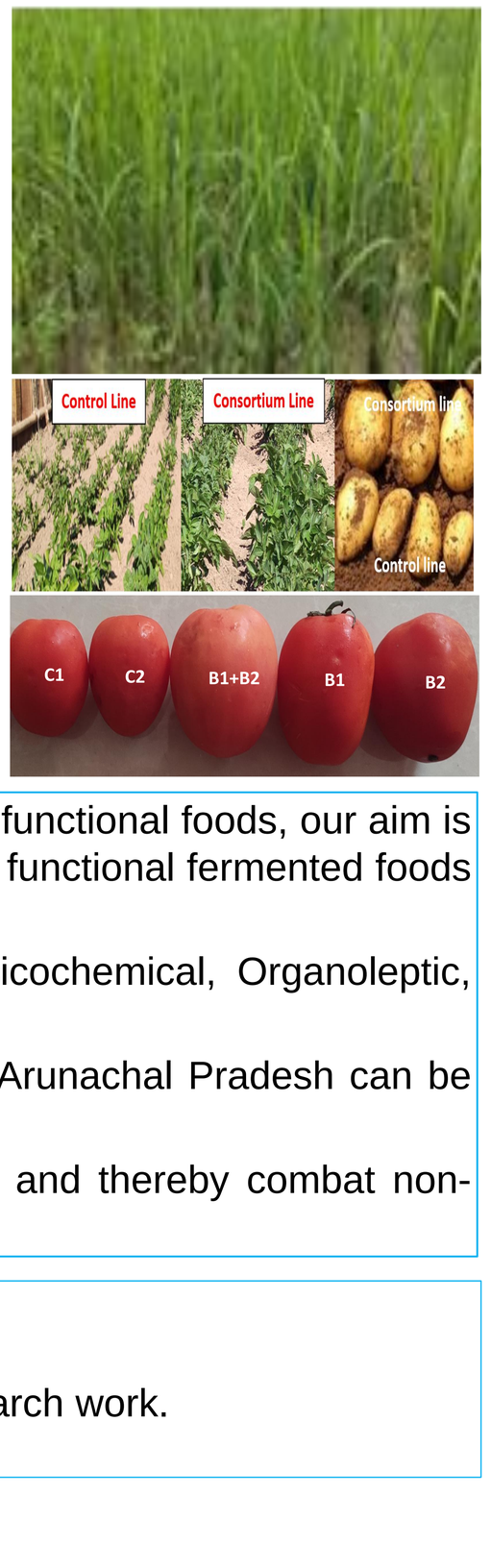


✓**In Climate Resilient Agriculture System research**, the nucleus of the R&D is on understanding the adaptogenic behaviour of soil microbiome community towards climate stressed crops of the state of Arunachal Pradesh.

❖Special focus is on **translating** the generated knowledge towards development of products for solving unmet needs of Agricultural system.

❖Developing efficient sustainable novel bio-materials based bio fertilizer formulation for combating **high altitude stress** in crops of Arunachal Pradesh





Towards promotion of fermented food products of Arunachal Pradesh as promising nutraceuticals and functional foods, our aim is standardization of scalable safe technology towards production of clinically validated nutraceutical rich functional fermented foods and enriched probiotics

❖Promotion of fermented food and beverages of Arunachal Pradesh and evaluation of its Physicochemical, Organoleptic, Nutritional, Antioxidant, and Quality control parameters

❖Our study acclaims that the beverages developed from the organically grown fruits and millets of Arunachal Pradesh can be adopted for scalable commercial production, and marketing

❖ Developing enriched probiotics which can be a novel approach to boost the micronutrient status and thereby combat non-communicable disease-associated malnutrition.

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