

TANNU KUMARI

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PROFILE SUMMARY

Environmental and agricultural biotechnology graduate with strong experience in field and laboratory research, environmental monitoring, data analysis, and scientific reporting. I can design and execute research projects with direct relevance to soil health, waste management, sustainability, and biosecurity risk reduction. I am experienced in working with industry partners, applying regulatory and procedural standards, and communicating technical findings to diverse stakeholders.

KEY SKILLS

Agricultural & Biosecurity

- Field sampling and inspection (soil and environmental samples)
- Crop, soil, and nutrient assessment
- Pest, pathogen, and biosecurity risk awareness
- Monitoring agricultural inputs and environmental impacts
- Regulatory compliance and protocol adherence
- Stakeholder engagement with farmers, researchers, and industry

Waste, Sustainability & Environmental Monitoring

- Waste stream and nutrient recovery analysis
- Environmental impact assessment (GHG emissions, nutrient losses)
- Recycling and organic waste system understanding
- Sustainability program and research support

- Liaison with industry, research institutions, and partners

Research, Data & Reporting

- Experimental design and execution
- Field and laboratory data collection
- Statistical analysis and data interpretation (R-based analysis)
- Greenhouse gas measurement and reporting
- Scientific writing, reporting, and publication preparation
- Attention to detail and quality assurance

Communication & Professional Skills

- Clear written and verbal communication
- Problem-solving and analytical thinking
- Team collaboration in fast-paced environments
- Time management and independent work
- Stakeholder-facing communication

RESEARCH EXPERIENCE

Master's Research Thesis – Agriculture, Environment & Sustainability

University of Western Australia (UWA) | Perth, WA

2023 – Present

(Manuscript in review / publication in progress)

- Designed and executed an environmental and agricultural research project investigating the sustainability of food-waste digestate management and soil application.
- Conducted field soil sampling, laboratory incubation experiments, and controlled environmental monitoring.
- Performed soil chemical analysis, nutrient profiling (NH_4^+ , NO_3^-), pH and electrical conductivity measurements.
- Measured and analysed greenhouse gas emissions (CO_2 , N_2O) to assess environmental impact and sustainability outcomes.
- Applied data collection, statistical analysis, and interpretation to evaluate treatment effects on soil health and emissions.
- Investigated microbial community responses relevant to soil function, nutrient cycling, and environmental risk.
- Collaborated with industry partners and academic supervisors to align research with real-world agricultural and waste management applications.
- Ensured compliance with laboratory protocols, safety standards, and research governance requirements.

PROFESSIONAL EXPERIENCE

Food & Beverage Attendant
Virgin Australia | Perth, WA
Oct 2023 – Present

- Operate in a highly regulated environment, strictly following safety, hygiene, and operational protocols.
- Demonstrate strong communication and stakeholder engagement with diverse customers and team members.
- Apply problem-solving skills to resolve issues efficiently in time-critical situations.
- Maintain accuracy, attention to detail, and consistency while managing multiple priorities.
- Collaborate within multidisciplinary teams to ensure smooth, compliant operations.

EDUCATION AND TRAINING

Master of Biotechnology (Agriculture & Environmental Science)
University of Western Australia | Perth, WA | 2023 – 2025

Bachelor of Life Sciences
Osmania University | Hyderabad, India | 2020 – 2022

RESEARCH OUTPUT

- Aerated Digestate Management Enhances Soil Properties, Reduces Greenhouse Gas Emissions, and Shifts Microbial Communities

Journal manuscript under review

REFERENCES

Available Upon Request