

## **Vermiculture Technology: Scientific Use of Earthworms in Sustainable technologies**

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### **Abstract**

Vermiculture technology is an emerging technology with high environmental sustainability, economical viability as well as social acceptability across the globe. The technology encompasses Vermi-composting Technology used to manage most organic wastes; Vermi-filtration Technology for treating municipal & several industrial wastewater; Vermi-remediation technology for cleaning of contaminated lands; Vermi-agro-production Technology for the production of chemical-free organic foods by worms & vermicompost; and Vermi-industrial Production Technology to produce valuable industrial raw materials from worms. The use of earthworms as a biological tool for waste management and for an efficient composting of food and farm wastes as well as for soil managers of fertility improvement to enhance “farm production” were known for ages but now it is being more scientifically and also commercially revived. Several experimentation of successful first four technologies for management of “municipal solid wastes”, treatment of “municipal & industrial wastewater”, remediation of “PAHs contaminated soils” and production of “wheat & corn crops” by use of vermicompost at Griffith University, Australia, with excellent results, suggesting potential role of earth worms in the area of bioremediation and biodegradation. Wastes are degraded by over 75% faster than conventional systems and compost produced are disinfected, detoxified, richer in nutrients & beneficial soil microbes; BOD loads & TSS of wastewater is reduced by over 95%; PAHs from are removed by over 80% in just 12 weeks; and crops growths are promoted by 30-40% higher as compared to chemical fertilizers. Earthworms are both “protective” & “productive” for environment and society.

### **Biography:-**

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