

"Microplastics: Emerging Threats to Plant Systems and Human Health"

Microplastics are increasingly recognized as emerging stressors within terrestrial ecosystems, particularly in agricultural soils where they accumulate through polymer-coated fertilisers, organic amendments, plastic mulching, biosolids, irrigation inputs, and atmospheric deposition. This talk will provide brief how microplastics alter soil structure, water dynamics, and microbial activity, thereby influencing plant physiology, gene expression, and nutrient uptake. Evidence of microplastic uptake, internalization, translocation, and accumulation within plant tissues will be discussed, elucidating potential implications for crop quality and food safety. By tracing these processes from soil contamination to human exposure, the presentation highlights critical research directions for understanding plant–microplastic interactions and their broader ecological and health consequences.