



EFFECT OF INDUSTRIAL EMISSION ON PLANT SPECIES: FINDINGS FROM THE PAST AND PROSPECTS FOR FUTURE RESEARCH

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ABSTRACT: The effect of lime kiln and thermal power plant emission on the morphology and biochemical composition of different plant species and possible bioremediation has been discussed in the present review in length. Dust fall, concentration of suspended particulate matter, sulphur dioxide, nitrogen oxide etc. exceed air quality standard causing metabolic disruption of plants and the symptoms like necrosis, chlorosis, tip burn etc. are noticeable. There is an overall reduction in chlorophyll, ascorbic acid, carotenoids and protein contents of the plant species. Depending upon the capacity of plant species to withstand the damage due to pollution, a sensitivity index of the plants has been worked out. The most tolerant species may provide a natural sink for air pollution and may be planted in large scale around industrial areas for mitigation of adverse effects.

Keywords: *Bio-remediation, Lime kiln, pollution, TPP*

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INTRODUCTION

Waste an unwanted or unusable material is any substance which is discarded after primary use. It is something that is thrown away because it is no longer useful and the item should only be considered waste if it cannot be recycled. The waste may be solid, semi-solid, liquid, and gases in form. It may be hazardous (toxic) or the non-hazardous waste. Hazardous waste is a waste with properties that make it dangerous or capable of having a harmful effect on human health or the

environment as a whole. In contrast, non-hazardous waste causes no harm in human or environment. Hazardous waste is highly reactive and poisonous. It is chemical, biological, explosive or radioactive and represents a serious threat to the human, plants and animal life. Hazardous material is having at least one of the four characteristics such as i) Ignitability, ii) Corrosivity, iii) Reactivity and iv) Toxicity (Giusti, 2009; Raju, 2021).

Industrial waste is the material generated by industrial activity which includes any material that