

UTILIZATION OF FLY ASH IN AGRICULTURE FOR IMPROVING SOIL PROPERTIES AND CROP PRODUCTIVITY

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Abstract: Fly ash constitutes the major portion of the total quantity of residues produced in coal fired thermal power plant. The large amount of fly ash that is generated each year calls for a great deal of research to determine its feasibility or various potential uses. Disposal of high amount of fly-ash from thermal power plants absorbs huge amount of water, energy and land area by ash ponds. In order to meet the growing energy demand, various environmental, economic and social problems associated with the disposal of fly-ash would continue to increase. Therefore, fly-ash management would remain a great concern of the century. Fly-ash has great potentiality in agriculture due to its efficacy in modification of soil health and crop performance. While compare to soil, fly-ash consists all the elements except organic carbon and nitrogen. The high concentration of elements (K, Na, Zn, Ca, Mg and Fe) in fly-ash increases the yield of many agricultural crops. But compared to other sectors, the use of fly-ash in agriculture is limited. Flyash addition to soil in different doses improves various physical and chemical properties of soil or improves soil quality and thereby is also beneficial for plant growth. Hence through the present review we can conclude that though fly ash is a waste of concern but now has become a boon for sustainable agriculture.

Keywords: Fly-ash, Agriculture, Soil health, Crop yield

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