STUDIES ON THE PHOTOSYNTHETIC PIGMENTS OF GARDEN PEA GROWN ON FLY ASH AMENDED SOIL

Ashish Tejasvi[1] and Sudhir Kumar[2]

[1]Department of Botany, Agra College, Agra- 282001, U.P., India
[2]Department of Botany, Kisan P.G. College, Simbhaoli- 245207, U.P., India
E-Mail: tejasvi.botany@gmail.com

Abstract : There are several sources to generate power like thermal power, nuclear power, tidal power, hydro power and power from fossil fuel and other non conventional sources. Due to large coal reserves in India energy generation through thermal mode is most common. Indian coal is high in ash content (35- 45 %). Present generation of fly ash from coal combustion in TPP_S is about 160 MT/year in our country. Management of fly ash is a serious problem worldwide. The present study is an attempt for finding the eco- friendly solution of the problem through fly ash soil amendment technology (FASAT). Field experiments were designed by using fly ash (FA), organic manure like farmyard manure (FYM), biocompost (SOM) and chemical fertilizer (CF) in different combinations. Four pea cultivars Azad P_1, E_6, Arkel and PSM were used in the study. Biochemical parameters (conc. of chl a, b and total chl) were estimated at 60 DAS by using fresh leaves. There was an increase in photosynthetic pigments in all treatments as compared to control. The increase was discernible under integrated nutrient supply system. The positive outcome of the results of the present investigation is expected to encourage use of fly ash in agriculture and thus decreasing environmental pollution. However, the changes in soil environment caused by fly ash incorporation need to be investigated on long term basis.

Keywords : Coal, Fly ash, Pea, Photosynthetic pigments, Pollution

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