Effect of coal fly ash on somatic chromosomes of *Cajanus cajan* L.

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ABSTRACT

To assess possible impacts of coal fly ash on somatic chromosomes of *Cajanus cajan* L. were investigated. The root were treated with diluted, semidiluted and concentrated solution of fly ash. The mitotic and phase indexes were determined and chromosomal abnormalities were investigated in both control and test groups. It was found that coal fly ash had a marked mitodepressive action on mitosis. Chromosome aberrations were observed in all stages of mitosis. Results of laboratory experiments reveals that cell size increased with the treatment of semidiluted and concentrated fly ash solution respectively, but cell size not affected when root tip treated with the diluted fly ash solution. The types of chromosomal abnormalities observed included: chromatid bridge, c-mitosis, disturbed metaphase. A pronounced toxic effect is observed in semidiluted solution and above its.