

P117. CYTOTOXIC, GENOTOXIC AND PHYSIOLOGICAL EFFECTS OF HERBICIDE GRANWEED

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Increasing pesticide usage will lead damage to the ecosystem and also human health. Allium test is a rapid and sensitive assay to detect cytotoxicity of several genotoxics and mutagenic agents. Cytotoxic effects of the herbicide Granweed [%75 Tribenuron methyl] were investigated by using Allium test. Also physiological effects (length of root and green leaf, chlorophy and MDA contents) of Granweed were examined on Allium cepa L. The roots of the 4 days old seedlings were treated with 0 g/lit (control=tap water), 0,05 g/lit, 0,1 g/lit, 0,2 g/lit and 0,4 g/lit concentrations of Granweed during 24, 48 and 72 hours. Granweed significantly decreased Mitotic Index (MI) and increased the chromosome aberrations (micronucleus, Anaphase bridge, sticky metaphase, disturbed anaphase, c-metaphase) at all concentrations and treatment periods when compared with their controls. It was also determined that Granweed enhanced the Malondialdehyde (MDA) level by increasing the lipid peroxidation, decreased the length of root and green leaf and caused changes in chlorophyll contents. All these changes were observed depending on concentration and duration of applied herbicide.

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